Profitable and Unprofitable Acres:

Patterns of European expansion across Van Diemen's Land, 1803-35

Imogen Christina Wegman

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Imogen Christina Wegman
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Abstract

This thesis uses Historic Geographic Information Systems (HGIS) to uncover the continuing and new patterns of land use in colonial Van Diemen's Land to 1835.

In 1817 free settlers were first encouraged to emigrate to the colony of Van Diemen's Land. They brought with them substantial assets, as well as ideals of British agriculture, and the following years saw a massive transformation of the island's landscape. By the 1820s many visitors assumed these new agriculturalists were aspiring to recreate Britain, and praised what they saw as the early stages of this. They dismissed the work of the former convicts on their much smaller grants, and ignored the thousands of years of land management conducted by the Tasmanian Aboriginal people. In fact, as much as the settlers sought to reshape the landscape, they themselves were reshaped by it. Their aspirations were only possible because of the work of their predecessors.

By placing land grants and sales data into an HGIS, this thesis reconstructs the sequence of European settlement in three regions of the island: New Norfolk, Bothwell and through the Midlands. These case studies are used to argue the existence of two primary European settlement patterns. The first is riverine intensive, a pattern based on European and settler-colonial precedent. The domain of emancipist grantees, the name reflects the significance of waterways in shaping the early colony. This pattern gave way to the open extensive in the early-1820s, as the colony's economy shifted to fine wool exports and the settlers required larger acreages.

This thesis argues that both of these patterns were reliant on the Aboriginal mosaic patterns, as the settlers were drawn to areas kept clear with fire-stick farming. Settlers in the open extensive stage were particularly drawn to the large 'plains', and their land-use represented a drastic departure from accepted British methods. Nonetheless, the riverine intensive settlers also benefited from cleared lands. By combining the settlement pattern parameters with environmental data and settlement sequences, this thesis argues that it is possible to uncover details of the pre-European landscape that were not recorded before it was irrevocably altered by the arrival of large-scale pastoral pursuits.

Connecting land records to colonial survey charts also enables this thesis to measure the extent to which acreages were over- or under-measured. Using these findings, it analyses allegations of corruptions that were frequently levelled against the colonial surveyors. Their work is critiqued within the context of surveyor work-load, changing settler and governmental priorities, and the rise of the Black War.

The real history of our landscape should be the history of the nobodies.

James Rebanks, *The Shepherd's Life*[1]

[1] James Rebanks, *The Shepherd's Life: A Tale of the Lake District* (Penguin Books Limited, 2015), 6.

Acknowledgments

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Finally, this is for Mum and Dad, whose combined interests gave me a love of history and the built environment. Thank you for the unending tea and love. Without you, this thesis would not be. Xx

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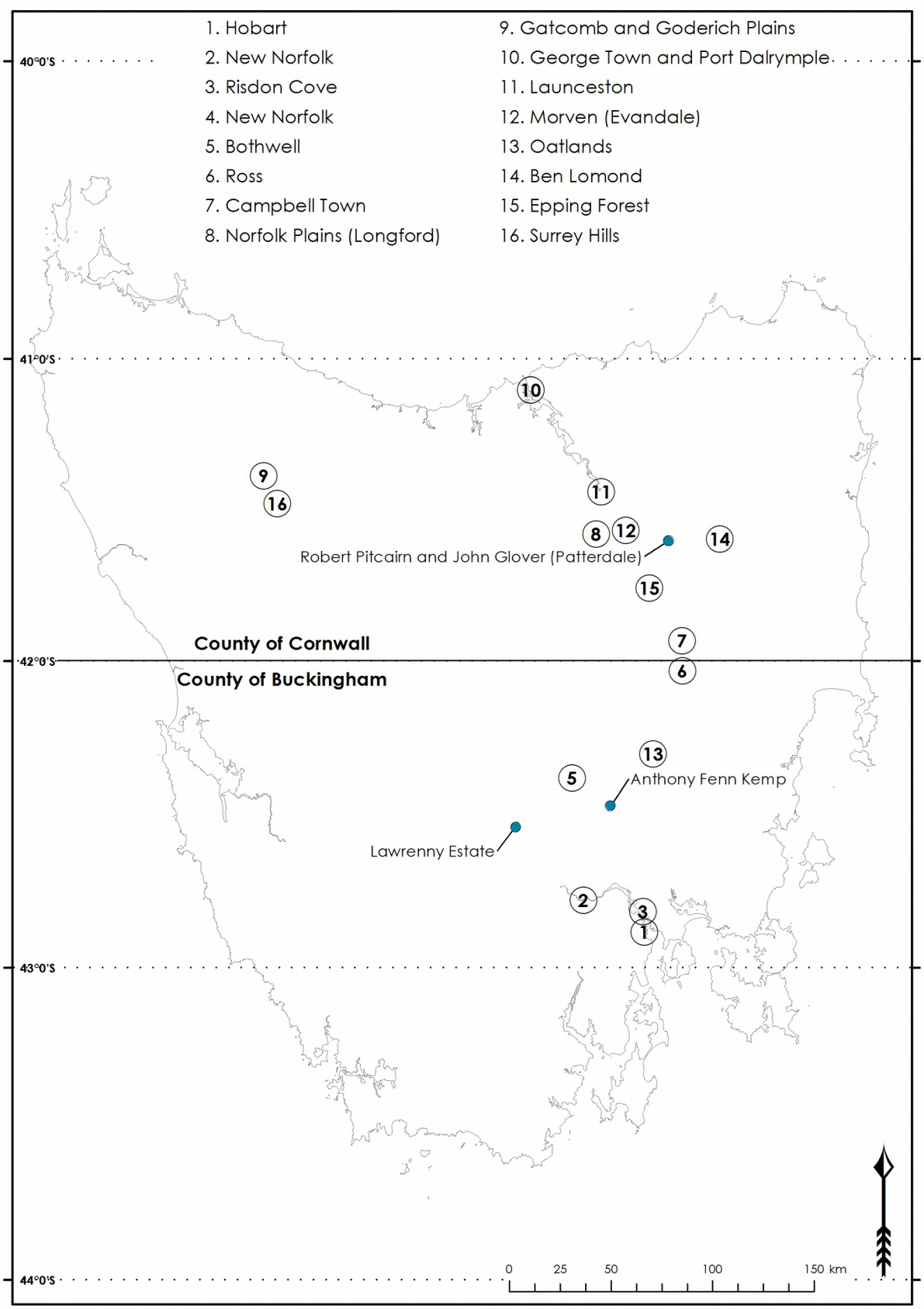

Chapter One:
Introduction

Flying over Tasmania can be spectacular. As you approach the north coast on a clear day, you might be fortunate enough to catch a glimpse of both the east and west capes that form the outermost tips of the Tasmanian mainland. But the flight over this long-inhabited land will reveal a few of its many secrets. Your descent towards Hobart commences, coming in over sand dunes and large swathes of open fields, the land alternates between rolling hills and flat plains, with the jagged peak of Ben Lomond briefly visible out to the left. This is a view only the birds of the nineteenth century would ever see. Looking out at the cleared fields you'll see they end abruptly, trees continuing the pattern to hilltops and down the other side. Just as abruptly they end, a tree-line forming the edge of another plain. For a few short months these lands will be varying shades of green. At other times, when the landscape is a blend of yellow and brown, large green circles will puzzle some passengers on your plane. This is an island reliant on irrigation, water sources can be unreliable. But it is a land characterised by brown grass scattered with skeletons of eucalypts. Hardy sheep graze in some of the driest areas; fine merino breeds benefit from some of the most dependable riverside pastures.

Seen from overhead, the Tasmanian landscape, with its patchwork of bushland and fields, is not the chequerboard of outback New South Wales or Britain. Rivers and mountains formed these patterns, not the surveyor's theodolite. Your flight sweeps low over Frederick Henry Bay, a fleeting glimpse of a long white beach, and with a bump you come in to land. Your journey has taken a route beyond the imagination of the inhabitants of nineteenth century Van Diemen's Land (be they settler or Indigenous), but the impact of their labours has shaped much of what you have just seen from the air.

This is a thesis about the history of Tasmania, a topic that has been covered in numerous books, since almost the earliest years of the British colony. It is different from these works, however, because it uses new methodologies to reveal a previously hidden story about how the Europeans made space for themselves on the island. This is a story filled with scoundrels and opportunists, bureaucrats, minions, explorers and incidental adventurers, but the protagonist is the land itself, the people are the supporting cast. And that is why this thesis is radical – it starts, literally, from the ground up. It relies on charts, the environment, calculations and vernacular evidence, and is distrustful of the stated intentions recorded in diaries and letters, or governmental instructions.

The aim of this thesis is to integrate data drawn from a number of sources (including official, personal, pictorial and cartographical accounts) and incorporate them into an historic Geographic Information System (HGIS). This reveals the intricate details of the process by which the Aboriginal nations of Tasmania were dispossessed and land was taken into the control of the European settler groups.[2] This is not an attempt to retell the martial story of two opposing parties struggling for territory, although the violent conflict and bloodshed of colonisation are not forgotten. Rather, the key focus is the fundamental processes by which land grants were strategically carved out of *Trouwanna* to create Van Diemen's Land.[3] The impact of pushing the Tasmanian Aboriginal people to the fringes, leading to violence and the eventual Black War, is not ignored. This thesis argues that the escalation in conflict left a mark both on historic charts and the landscape of Tasmania today.[4]

This research has created and applied a new methodology to answer three interrelated questions that assist in building a more informed understanding of both the pre-colonial and colonial landscapes of Van Diemen's Land. These three questions are:

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2 This thesis acknowledges that 'Europeans' is a generic word that can deny the Tasmanian Aborigines 'a specifically defined aggressor', and Lyndall Ryan's argument that it was British colonial policy in action in Van Diemen's Land, rather than European. This thesis uses 'British' when talking about specific groups or moments, but also names the settlers 'Europeans' because it seeks to look beyond colonial policy, to the decisions made by those on the ground. These decisions were determined, particularly in the beginning, by the environment and by human requirements. As a study into the factors informing colonial land alienation, these were not exclusive to the British, as the history of the long-lot (discussed in Chapter Four) demonstrates. Lyndall Ryan, *The Aboriginal Tasmanians* (Allen & Unwin, 1996), xx.

3 *Trouwanna* was an Aboriginal name for the island now called Tasmania. Patsy Cameron, 'Aboriginal Life Pre-Invasion', *The Companion to Tasmanian History*, 2006, http://www.utas.edu.au/library/companion_to_tasmanian_history/A/Aboriginal%20life%20pre-invasion.htm.

4 Henry Reynolds, *A History of Tasmania* (Cambridge: Cambridge University Press, 2011), 50–52.

1. What were the colonial expectations for land grants in Van Diemen's Land and how were they realised?
2. How were the grants given to former convicts and free settlers different?
3. What do European land choices reveal about Tasmanian Aboriginal land uses?

Through identification and close analysis of land grants and sales on the Van Diemonian survey charts of the 1820s and 1830s, this thesis has created a time sequence of European 'settlement', across three different regions of the island.[5] It focuses on the period between 1803 and 1835, representing the first three decades of the colony of Van Diemen's Land.[6]

For the first time it is possible to define the differences between grants taken by the Europeans early in the life of the colony, and those that were alienated later. The detailed use of Historical Geographic Information Systems (HGIS) has revealed two very distinct European landscapes in Van Diemen's Land: the 'riverine intensive' and the 'open extensive'. It is argued that these two patterns were the products of their time, but also that they were reliant on the the patterns that preceded them. This claim has been made previously by James Boyce in his examination of the cultural development of the Van Diemonian colony. This thesis will revisit this argument, but will apply a spatial history approach that uses the landscape itself as a source of historical data. Through this methodology the consistencies and inconsistencies of the settlement's development are revealed.[7]

The term 'riverine intensive' is used to describe the smaller settlement pattern that was laid out along the waterways. Together with the later 'intermediate free' grants, this pattern was based on the long-lot formation that was found throughout Europe and many other

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5 This thesis uses several terms that have difficult connotations, such as 'settler', 'settled districts', and describes lands as 'open for settlement'. All of these terms empty a land of its Indigenous inhabitants, and suggest that the arrival and establishment of European populations was peaceful. Terms that explicitly acknowledge the conflict, violence and dispossession that occurred, such as 'invasion' or 'occupied lands' bring other connotations. To some extent the historian seeks to be a neutral bystander, attempting to provide a balanced understanding of events. There is, however, no neutral language, and 'settler' has been chosen as the most widely understood for the purposes of this discussion. See: Tracey Banivanua-Mar, 'Settler-Colonial Landscapes and Narratives of Possession', *Arena Journal*, no. 37/38 (2012): 176.

6 1835 has been chosen as a nominal end date within a period of change in the colony. The process of land granting changed significantly in 1831 and it would not be effective to compare grants made before this with those made afterwards. Other factors influenced this date: several datasets, including the Land Conveyance Register, end around 1835; with the opening of Melbourne in 1835, settlers were immediately drawn from Van Diemen's Land, changing the dynamic of the colony; and Lieutenant-Governor George Arthur was recalled in 1836.

7 James Boyce, *Van Diemen's Land* (Melbourne: Black Inc, 2008).

colonial locations, including North America. The primary purpose of the riverine intensive was to provide former convicts (also called emancipists), and other small-scale farmers with the ability to become self-sufficient, while maintaining administrative oversight. The open extensive was a deviation from British agricultural practices and was well-suited to large-scale wool productions. It also enabled free settlers who emigrated to Van Diemen's Land to manipulate the process of alienation to their own ends. While very different, both the riverine intensive and open extensive patterns exploited pre-existing land-use patterns established by the Tasmanian Aborigines over thousands of years.

This research demonstrates a multi-disciplinary approach to historical understandings of colonial space-making.[8] It is founded in principles of landscape history, an approach developed by William George Hoskins in the mid-twentieth century that treats the landscape as an archival source that can be read.[9] In combining a systematic GIS with more traditional historical methods, it seeks to establish the parameters of these European patterns, and then uses them as a guide to interpreting pre-European land use. The definitions of these patterns are determined over the following six chapters with reference to contemporary accounts from a range of archival materials, including journals, newspapers and government instructions, alongside modern observations of the environmental particulars of each region, including soils and topography. The historic data has been placed within a GIS that also contains a timeline of specific acreage alienation, allowing the spatial factors to be compared and analysed.

Chapter synopsis

This thesis is divided into three parts, each containing several chapters. Part I provides the context and rationale for the research. Chapter Two outlines the methodologies used in this

8 The development of GIS in historical research is covered in Chapter Two. Aspects of these methodologies, particularly those that align with environmental histories, have been used occasionally in Australian history, most notably by Grace Karskens in *The Colony: A History of Early Sydney* (Australia: Allen & Unwin, 2010).

9 Initially, this approach had a British-centric focus, particularly in uncovering evidence of societies that did not leave sufficient written records. It can, however, be adapted to other times and places, as it has a focus on examining the physical traces left in the landscape, and using them to ask and answer questions about the relationship between the occupants and the land they lived on. This research uses soils, topography, and broad archaeological traces as sources of historical evidence. Two of the foundational texts are: W.G. Hoskins, *The Making of the English Landscape* (Hodder & Stoughton, 1955); O. Rackham, *The History of the Countryside* (Phoenix Giant, 1997). For more recent application of landscape history approaches around the world, see any edition of The Journal of the Society for Landscape Studies, *Landscape History*, continuing, http://www.landscapestudies.com.

thesis, with particular focus on the Geographic Information Systems (GIS) utilised. It discusses the use of GIS in historical research, placing this thesis within the field, and notes the most significant issues with these methods. It describes the process employed for the data collection and manipulation, providing definitions of the key terms used. This chapter also outlines the various chart sources used, including the Land District Charts, County Maps and Exploration Charts held in various archives.

Discussion about settlement patterns is book-ended by chapters that examine the practicalities of measuring, mapping and alienating land in a new colony. Chapter Three opens discussion about the history of Van Diemen's Land, shown through the lens of the Survey Office, a government department often hampered by a lack of resources. It discusses the general purposes of cartography, particularly in colonisation, before specifically looking at Van Diemen's Land. This is divided chronologically into four sections, 1803–12, 1812–20, 1820–25 and 1825–35, representing approximate shifts in Survey Office staff and management.

This chapter challenges the traditional narrative; it is often argued that the office was corrupt and incompetent.[10] This was an opinion originally promulgated by critics of the early colony, for example Henry Melville and George Frankland. It has rarely been challenged, although Alan Jones' history of the department provided more depth to the accusations.[11] James Drown has also analysed the work of the New South Wales and Van Diemen's Land Survey Offices, following a traditional approach based largely on contemporary records. As an administrative analysis of colonial survey departments, especially New South Wales, it is comprehensive. It does not, however, apply systematic analysis to the cartographic evidence.[12]

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10 L.C. Mickleborough, *William Sorell in Van Diemen's Land: Lieutenant-Governor 1817–1824. A Golden Age?* (Blubber Head Press, 2004), 29; Lloyd Robson, *A History of Tasmania: Volume I Van Diemen's Land from the Earliest Times to 1855* (Melbourne: Oxford University Press, 1983), 117.

11 H. Melville, *The History of Van Diemen's Land: From the Year 1824 to 1835, Inclusive; During the Administration of Lieutenant-Governor George Arthur*, ed. G. Mackaness, Australiana facsimile editions no. 104 (Adelaide: Libraries Board of South Australia, 1967); George Frankland, *Report on the Transactions of the Survey Department of Van Diemen's Land, from the Foundation of the Colony to the End of Colonel Arthur's Administration* (William Gore Elliston, 1837); A. Jones, *Backsight: A History of Surveying in Colonial Tasmania* (Hobart: Institute of Surveyors, Australia (Tasmanian Division), 1989). See also K. N. Toms and P. M. Plunkett, 'Crown Land Survey Administration in Van Diemen's Land: A Historical Indicator for Integrationists', *Australian Surveyor* 31, no. 2 (1 June 1982): 72–83.

12 J.M. Drown, 'An Apparatus of Empire: The Construction of Official Geographic Knowledge in the Survey Departments of New South Wales and Van Diemen's Land, 1788-1836' (University of Sydney, 2012), http://hdl.handle.net/2123/11444.

With GIS it is possible to critically examines some of the sources described in Chapter Two, including the Land District Charts, and place the work of the surveyors into a wider colonial context. Chapter Three tests the impact of a range of factors on the work of the Survey Office by measuring the accuracy of surviving maps. Influences included training and capacity, the increasing remoteness and size of grants, as well as events beyond the office – settler motives and increasing hostilities with both bushrangers and the Tasmanian Aboriginal people. This chapter argues that the surveyors did not work in isolation, and were affected by colonial circumstance, but in unexpected ways.

Part II examines the individual settlement patterns. Chapter Four examines the long-lot, including the riverine intensive, patterns. It opens with a discussion about the history of the long-lot plot of land, arguing that although this pattern was common in many different parts of the world, the British colonial version was regulated to the point of distinction, forming the 1:3 long-lot. This chapter covers the initial land settlement pattern seen in Van Diemen's Land: the riverine intensive, and the associated intermediate free. Both patterns are tied to the river edges, and are a crucial form in a developing colony. It assesses the pattern according to soils, topography and rainfall, finding a set of similar circumstances. This chapter argues that without these forms, later stages of settlement would not be possible.

Chapter Five starts with a brief overview of the agricultural scene settlers left behind in the British Isles, and the policy changes that opened up more land for free settlements. This includes discussion on the differences between grants in Van Diemen's Land and New South Wales, and the absence of a consistent rectilinear layout in Van Diemen's Land. Open extensive plots were still drawn to low lands, although this chapter reveals they had a very different relationship with the waterways. This was because land use was changing, and landholders needed water for different purposes. The chapter argues that these plots were indicative of social and economic change in the colony.

Part II closes with an examination of pre-European mosaic land patterns. This chapter draws on the evidence of Chapters Four and Five to argue that European settlement patterns can reveal the histories of pre-European land-use that have been destroyed by more recent suburban and agricultural development. After an overview of the historical debate around fire-stick farming, Chapter Six defines the parameters adopted for this

research. It then moves to two case studies, to demonstrate the power of HGIS to contribute substantial information to understandings of the landscape. It uses the example of a well-documented location (around Ben Lomond in the north of the island) to demonstrate a traditional approach, and then uses HGIS to build an image of the landscape of New Norfolk, which was not captured in many documents.

Part III contains one concluding chapter, which reunites the separate patterns to discuss the overarching changes in the Van Diemonian landscape. Chpater Seven continues Boyce's argument that there were 'two societies: Van Diemen's Land and Tasmania', the former made up of emancipists and convicts, and the latter of free settlers. Where Boyce explores the interaction between these two groups, however, this chapter argues that although free settlers were dismissive of the emancipists, it was only through the work of the former convicts in establishing the earliest European grants that subsequent massive pastoral and agricultural expansion was possible.[13] This chapter also explores the argument made by Geoff Raby that the Australian colonies were the reverse of Britain, because they valued labour over land and were therefore considered wasteful by visitors to the colony.[14]

It argues that the settlers were torn between the opportunity of the wide acres on offer, and the danger of the most remote reaches of those same acres. It opens with an overview of the colonial shift in priorities, from communal to privatised resources, and the corresponding transition from riverine intensive to open extensive settlements. This sets the scene for two arguments. The first is that the aspirations of emancipist and free settlers were diametrically opposed, and therefore created two entirely different landscapes. The second argument is that the wealthier settlers who could afford large properties were impeded by fear of attack on the frontier, and this was manifested in a physical form of land settlement that is still visible today.

Research Background

When the British arrived in Van Diemen's Land in 1803, they intended to secure a claim on the island to prevent occupation by other European powers. John West suggested it was perhaps also 'hasted by the jealousy of a rival power' (France), as well as confirmation

13 See chapter eleven, 'The Coming of Little England', *Van Diemen's Land*, 145–61.
14 Geoff Raby, *Making Rural Australia: An Economic History of Technical and Institutional Creativity, 1788–1860* (Melbourne: Oxford University Press, 1996).

that Van Diemen's Land was an island in 1798.[15] The island had been in use as a supply stop for explorers seeking fresh water and safe harbour since at least 1772, and within this context claiming it was a logical move by the British.[16] But the creation of the Van Diemen's Land colony was informed by larger considerations, as new world European colonisation caused what has been termed a 'great land rush'.[17] The acquisition of new lands enabled the British to secure resources in the Southern Ocean, especially the profitable sealing and whaling grounds that surrounded the island.[18]

On arrival, the British encountered what they presumed was a largely undeveloped land. Although not oblivious to the presence of the Tasmanian Aboriginal people, they did not understand the depth of their connection to the land. The island had been inhabited for at least 40,000 years, with the land bridge connecting the southern-most landmass to its northern island covered with water at the end of an ice age some 12,000 years ago. With this, the Tasmanian Aborigines were cut off from their mainland counterparts. At the time of arrival of the colonial settlers it is estimated that there were between 6,000–8,000 Aboriginal people living off the land and its coastal resources.[19] They had transformed the island of *Trouwanna*, creating a landscape in which they could live comfortably, especially through the extensive use of fire to form productive land by encouraging the growth of pasture for native animals and tubers for humans. Fire was also used to create traps, clear paths, and send messages. The nine distinct Aboriginal nations of people adapted to the diverse climates across the island.[20] On the stormy west coast the North West clans built huts, and dug wells that they would return to seasonally, which on the milder east coast the Oyster Bay clans erected temporary bark windbreaks when necessary.[21]

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15 John West, *The History of Tasmania*, ed. A.G.L. Shaw, Revised (Sydney: Angus and Robertson, 1971), 26–31; Boyce, *Van Diemen's Land*, 20–21; Reynolds, *A History of Tasmania*, 24–26.

16 Boyce, *Van Diemen's Land*, 20.

17 John C. Weaver, *The Great Land Rush and the Making of the Modern World, 1650–1900* (Montreal: McGill-Queen's University Press, 2003).

18 For discussion on early whaling stations around Van Diemen's Land, see Susan Lawrence, 'A Maritime Empire: Archaeological Evidence for Van Diemen's Land Whaling in the Southern Oceans', *Tasmanian Historical Studies* 13 (2008): 15–33.

19 Lyndall Ryan, *Tasmanian Aborigines: A History since 1803* (NSW: Allen & Unwin, 2012), xx; 3-4; Cameron, 'Aboriginal Life Pre-Invasion'.

20 These nations are today known as: South West, North West, North, Big River, South East, Oyster Bay, Midland Plain, Ben Lomond and North East Nation. For a map of these nations see Chapter Six. Ryan, *Tasmanian Aborigines*, 3–42.

21 Ryan, 36; M. Johnson and I. McFarlane, *Van Diemen's Land: An Aboriginal History* (Sydney: UNSW Press, 2015), 59.

In discussing the empire-building of the long eighteenth century, historians have tended towards broad approaches that assess overarching themes, rather than fine-detailed case study analysis. The strength of this approach is that it helps to identify and contextualise global patterns and themes, but it inevitably omits perspectives of individual groups or locations that played a crucial role. John C. Weaver sought to mitigate for this in *The Great Land Rush and the Making of the Modern World, 1650–1900*, by locating his study within a body of texts that were reliant on the 'high magnification' of more localised studies. Weaver looked beyond the British colonies, employing comparisons with other colonies of the eighteenth and nineteenth centuries to demonstrate themes common to the global land rush. Weaver argued that there was an 'aggressive will to possess and alter land' that focused on ordering the land and 'elbowed aside' the First Nation inhabitants. Despite the ubiquity of these themes in different empires, however, Weaver attributed their origins to the British Empire (and later the United States).[22] These attitudes of colonisation are apparent in Van Diemen's Land, although they were concentrated in governmental policy rather than the broader interests of settlers on the ground.

In *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. Pomeranz argued that industrialisation was integral to the success of Europe, and its subsequent overtaking of East Asia was in part due to western colonisation. The British Isles contained a total of 17,000,000 arable acres, and by the nineteenth-century they had become reliant on the additional 'ghost acres' provided by territories beyond the constraints of the limited homeland acres. By 1830, Pomeranz calculated, Britain possessed over 23,000,000 acres colonial land for wool production alone, with up to 7,000,000 further acres of devoted to cotton, sugar and timber.[23] The Van Diemonian shift from riverine intensive to open extensive fits within this narrative of an expanding British market for wool that was reliant on aggressive pastoralism. It affected not only those who sought success as wool-farmers and merchants, but also those settlers who received land before the rise of wool-farming on the island.

In *Replenishing the Earth: The Settler Revolution and the Rise of the Anglo-World (1783–1939)*, Belich suggested that colonies focussed on the quality or the quantity of goods depending

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22 Weaver, *The Great Land Rush*, 43.

23 Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, The Princeton Economic History of the Western World (Princeton: Princeton University Press, 2000), 275–76.

on the state of supply and demand, and credited the success of colonies to 'the remarkable explosion of the nineteenth century', rather than longer term factors.[24] He argued that 'Australasia managed to boom despite the odds', implying that the convict heritage of the colonies was a burden rather than an asset.[25] Instead, Belich attributed success to improvements in passenger sailings, which brought more free settlers to the Australian colonies, catalysing 'explosive colonisation'. This argument is better suited to explaining post-gold rush expansion, as serving convicts comprised forty to fifty per cent of the Van Diemonian population between 1817 and 1839. Assisted migration to the colony remained limited before the ending of transportation, and Belich's argument under-plays the initial work of the first settlers, who made Australia a tempting destination for would-be emigrants.[26]

As with Weaver and Pomeranz, these discussions examine settler-colonial movement through the lens of time, secure in the knowledge of what would follow. The settlers, however, were guided by the principles local to them, and without any hindsight to caution or confirm the wisdom of their decisions. The principles of agricultural and pastoral expansion that have been emphasised by these historians were significant from the 1820s onwards, with ever-increasing quantities of wool sent to auction in Britain (1,359,203 pounds in 1831).[27] What these arguments do not address, and actively ignore in the case of Belich, is the dominance and significance of the preceding smaller riverine intensive pattern.

In considering the nature of these small-scale grants, two arguments can be combined to contribute to the larger discussion. Brian Fletcher argued that small-scale grants were given to the emancipists as a mechanism of keeping them busy (while also actively occupying the land).[28] From another perspective, Angus McGillivery suggested that settlements were placed on the edges of navigable rivers to create restocking depots for

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[24] James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Anglo-World, 1783–1939* (Oxford: Oxford University Press, 2009), 4. Belich has been criticised for his limited consideration of indigenous or female voices, and therefore only considers a narrow field. See: Zoë Laidlaw, 'Breaking Britannia's Bounds? Law, Settlers, and Space in Britain's Imperial Historiography', *The Historical Journal* 55, no. 3 (September 2012): 807–30.

[25] Belich, *Replenishing the Earth*, 263.

[26] Boyce, *Van Diemen's Land*, 162.

[27] J. B. Kirkpatrick, Kerry Lynn Bridle, and CSIRO (Australia), eds., *People, Sheep and Nature Conservation: The Tasmanian Experience* (Collingwood: CSIRO Publishing, 2007), 9.

[28] B.H. Fletcher, *Landed Enterprise and Penal Society: A History of Farming and Grazing in New South Wales before 1821* (Sydney: Sydney University Press, 1976).

passing ships.[29] Despite their different angles, both Fletcher and McGillivery reveal that these acreages were intended to be productive. Although the riverine intensive grants were orchestrated by official instruction, the pattern had a long history of use around the world. These were productive 'ghost acres' in their own right, but also pathways into the island, creating a network of settlement crucial for expansion. As well as placing riverine intensive settlement patterns within a wider history of colonisation, this research explores the advantages the settlers themselves received by being located on river edges.

In Van Diemen's Land the settlers did not rigidly adhere to the ideals of agriculture brought out from Britain, as they adapted to local conditions. In *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*, Alfred Crosby demonstrated the impact the host environment could have on the settlers. He argued that much of colonial expansion was driven by biological compatibility, and the success or failure was in part attributable to environmental determinism.[30] The 'Neo-Europes', among which Van Diemen's Land can be counted, were located in the mid-latitudes, where the environmental extremes were within familiar limits for European (especially British) settlers.[31]

Nonetheless, the locations chosen for settlement had not been shaped by centuries of prior European agriculture. This posed practical difficulties for the settlers. Geoff Raby observed that while the colonists struggled with resourcing, they were able to creatively find solutions. Settlers in the Australian colonies were provided with an abundance of land, but very limited labour. This was the reverse of the situation in Britain, where labour was cheap but land shortages meant that every acre had to be used efficiently.[32] The impact of this difference is explored in Chapter Seven.

In choosing locations that shared similar environmental conditions, it could be assumed that the settlers sought to replicate the agricultural and urban conditions of their homes.

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29 Angus R McGillivery, 'Convict Settlers, Seamen's Greens, and Imperial Designs at Port Jackson: A Maritime Perspective of British Settler Agriculture', *Agricultural History*, 2004, 261–88.

30 Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*, second edition, Studies in Environment and History (Cambridge: Cambridge University Press, 2004).

31 Weaver, *The Great Land Rush*, 11. Another British colony with a recognisable environment is Concord, Massachusetts, examined in extensive detail by Brian Donahue in *The Great Meadow: Farmers and the Land in Colonial Concord* (Yale University Press, 2004).

32 Raby, *Making Rural Australia*. Raby takes an economic perspective, for analysis from a more scientific viewpoint see: T. Henzell, *Australian Agriculture: Its History and Challenges* (Melbourne: CSIRO Publishing, 2007). For more specific discussion that demonstrates the practical issues of establishing sheep farming in Tasmania, see: Kirkpatrick, Bridle, and CSIRO (Australia), *People, Sheep and Nature Conservation*.

Settlers and visitors perceived the colony differently, and the criticisms made by visitors about what they saw as failings have continued to influence historical discussion of this period.[33] Karskens observed the abstract manner in which visitors such as Darwin saw New South Wales. Sydney, she argued, was built from a confusion of the four stages of progress admired by the Europeans: hunting and gathering, pastoralism, agriculture, and finally the construction of cities with associated society and culture. As Sydney did not fit into the acceptable narrative of progress, the settlement was absorbed into the overarching story of colonial expansion, and the detail of its physical formation swept aside.[34] Karskens used environmental history to explore the real origins of the Sydney colony, arguing that the sites chosen were often informed by the landscape itself more than the instructions set out by the governing body. Using a methodology that combined environmental information with historical charts, official and vernacular reports, and archaeological findings, Karskens built up a compelling image of how the settlement was shaped by, and interacted with, the pre-European landscape.

Environmental histories have been effectively used to analyse small regions, such as in Tom Griffith's *Forests of Ash: An Environmental History*.[35] By analysing the history of Victoria through the lens of the mountain ash forest, Griffiths was able to discuss topics including Aboriginal, industrial, environmental and recreational histories, with the mountain ash forests operating as a continuing theme. In using these large trees to ground the stories, Griffiths demonstrated that nature is still perceived as immovable, while each chapter highlighted its fragility. This contradiction in how the environment is encountered and interpreted was summarised by Tim Bonyhady who expressed irritation at the tendency of scientists to over-generalise the attitudes and intentions of colonists, thereby overplaying

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33 By the 1830s Edward Gibbon Wakefield's ideas of 'systematic colonisation' were introduced, intended in part to address the 'miserable mess' of colonisation that came before by restructuring the land grant and sales system. Van Diemen's Land was settled in the pre-Wakefield period, and this thesis focuses primarily on the period before these systematic reforms were introduced. Tony Ballantyne, 'The Theory and Practice of Empire-Building - Edward Gibbon Wakefield and "Systematic Colonisation"', in *The Routledge History of Western Empires*, ed. R. Aldrich and K. McKenzie, Routledge Histories (Taylor & Francis, 2013), 89–101. For examples of comments about Van Diemen's Land see: W.H. Breton, *Excursions in New South Wales, Western Australia, and Van Diemen's Land, during the Years 1830, 1831, 1832, and 1833*, Second (London: Richard Bentley, 1834); James Dixon, *Narrative of a Voyage to New South Wales and Van Diemen's Land in the Ship Skelton During the Year 1820* (Edinburgh: John Anderson, 1822). For dismissive attitudes that rely on such comments see: R.M. Hartwell, *The Economic Development of Van Diemen's Land, 1820–1850* (Carlton: Melbourne University Press, 1954); Fletcher, *Landed Enterprise and Penal Society*.

34 Karskens, *The Colony*, 70.

35 Tom Griffiths, *Forests of Ash: An Environmental History* (Cambridge: Cambridge University Press, 2002).

their malice towards the local environment.[36] Examining colonial art for information, Bonyhady argued that the settlers were quick to enact environmental protections. While not excusing unsustainable behaviour, by returning the conversation to contemporary attitudes he emphasised that the settlers thought nature 'immovable'. They did not understand the ecosystem they entered, and thus transplanted assumptions from Britain about environmental management.

This focus on contemporary attitudes is crucial to understanding the practicalities of decisions made by the settlers, although it is easier to apply to studies of small regions where motivations and outcomes can be contained within a reasonable research framework. These histories are often social histories that interrogate the stories of the families and events particular to a town or a region. They therefore move beyond government intentions towards the histories of the ordinary people trying to eke out a living in an unfamiliar environment.[37] The risk in this approach is that details of the larger picture will be omitted, which is where approaches that merge micro-histories into larger discussion are successful.[38] Ruth Morgan, while giving an overview of representations of rural and environmental histories in the journal *Australian Historical Studies*, noted the fields' increasing popularity in Australia as a means of 'making sense of rural and environmental change in the twenty-first century.' Morgan argued that environmental histories cross traditional delineations between urban and rural, thus expanding the view beyond that of a local history.[39]

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[36] T. Bonyhady, *The Colonial Earth*, Paperback, Miegunyah Press Series (Melbourne: Melbourne University Press, 2002).

[37] For examples of this see: Alan Atkinson, *Camden: Farm and Village Life in Early New South Wales* (Melbourne: Oxford University Press, 1988); Grace Karskens, *The Rocks: Life in Early Sydney* (Carlton: Melbourne University Press, 1997); Jan Barkley-Jack, *Hawkesbury Settlement Revealed: A New Look at Australia's Third Mainland Settlement 1793–1802* (N.S.W.: Rosenberg Publishing, 2009).Relevant Tasmanian local histories include: K.R. Von Stieglitz, *A History of Evandale* (Launceston: Birchalls, 1967); Llewelyn Slingsby Bethell, *The Valley of the Derwent* (Hobart: L.G. Shea, Government printer, 1958); National Trust of Australia and Campbell Town Council, *Campbell Town Tasmania: History and Centenary of Municipal Government* (Tasmania: Campbell Town Municipal Council, 1966); Llewelyn Slingsby Bethell, *The Story of Port Dalrymple: Life and Work in Northern Tasmania* (Hobart: Blubber Head Press, 1980); Shayne Breen, *Contested Places: Tasmania's Northern Districts from Ancient Times to 1900* (Hobart: Centre for Tasmanian Historical Studies, University of Tasmania, 2001); S. Ellis, *Bothwell Revisited: A History: Foundation, Federation and the Millennium* (Tasmania: Bothwell Historical Society Incorporated, 2001); Phillip Tardif, *John Bowen's Hobart: The Beginning of European Settlement in Tasmania* (Hobart: Tasmanian Historical Research Association, 2003); Hamish Maxwell-Stewart, *Closing Hell's Gates: The Death of a Convict Station* (Sydney: Allen & Unwin, 2008); Margaret Christine Dillon, 'Convict Labour and Colonial Society in the Campbell Town Police District: 1820–1839' (University of Tasmania, 2008).

[38] For example: Weaver, *The Great Land Rush*.

[39] Ruth A. Morgan, 'AHS Classics: Rural History and Environmental History', *Australian Historical Studies*, June 2017, 1–15.

In New South Wales, as Karskens observed, the new country was seen as a 'testing ground for a cornucopia of plants from all over the world'.[40] The complaints of visitors about the failings of the Van Diemonian settlers indicates that they also did not intend to directly transplant the ideals of the 'English country garden' to their new environs. Van Diemen's Land, however, was praised for its open spaces and wide plains, created by the unacknowledged work of the Tasmanian Aborigines. In this regard it was different to New South Wales, and the later New Zealand settlements, and possibly easier to bring into British-style cultivation.[41] Criticisms of colonial agriculture, however, reveal that it was still considered a disappointment to many visitors. The foundations laid out by the first emancipist grantees and the early governing bodies were integral to the colony seen by visitors decades later, and yet as Belich demonstrated, these early years have often been discredited as unimportant.[42]

Historians such as R.M. Hartwell and Fletcher took the position that the pre-European landscape of Van Diemen's Land was a blank canvas, with very little worth considering before the expansion of pastoral and agricultural pursuits by the free settlers.[43] This included the period of infancy, when the Europeans worked to become established in an unfamiliar environment. Fletcher only mentioned the landscape the Europeans found on arrival in reference to the trouble they had in clearing it.[44] Hartwell's coverage of pre-1820s Van Diemen's Land was little more than a page, and his rationale for starting at 1820 followed the principle that low, scattered populations made it of little interest to the historian. Throughout the text are assertions that it was a 'parody of a colony' or 'little more than a prison farm', statements often taken directly from contemporary colonists, without any attempt to determine their validity or accuracy.[45] In reality, only 17.7 per cent of the population was made up of serving convicts in 1817, although there were many emancipists. It is clear from Hartwell's comments that he lumped the free and unfree

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40 Karskens, *The Colony*, 266.
41 Boyce, *Van Diemen's Land*, 23–24.
42 Belich, *Replenishing the Earth*.
43 Hartwell, *The Economic Development of Van Diemen's Land, 1820-1850*; Fletcher, *Landed Enterprise and Penal Society*.
44 Such an attitude was prevalent in the midst of the convict system, with Henry Melville calling the island in the years to 1817 'nothing but a jail'. As Hartwell and Fletcher demonstrate, such a view continued throughout the twentieth century. *Landed Enterprise and Penal Society*; Melville, *The History of Van Diemen's Land*, 13.
45 *The Economic Development of Van Diemen's Land, 1820-1850*, 11–12; 67.

together, in a way that implied their convict status continued after the completion of a sentence.[46]

Since the mid-twentieth century, interest in the period immediately following the arrival of settlers has grown. Consequentially, discussion about the contact zone between the two cultures, the inhabitants and the newcomers, has also increased. This thesis does not engage with the literature that discusses the reasoning behind the European settlement of Van Diemen's Land beyond the arguments mentioned above. It does maintain that an understanding of the mechanisms employed to establish a British hold over the island is central to consideration of the the practical results of colonisation. Some have argued that a colony such as Van Diemen's Land was driven by the operation of settler-colonialism, whereby the newcomers sought to supplant the previous inhabitants and their culture by overlaying their own; in this instance British agriculture and urbanisation.[47] Several means were employed to enact and reinforce this takeover, for the benefit of both local and remote audiences. Brian Harley, Norman Etherington and Tracey Banivanua-Mar have all argued about the efficacy of cartography and nomenclature in erasing pre-European landscape.[48] In an effective case study of the role of surveyors as intermediaries between the two cultures that collided in New Zealand, Giselle Byrnes argued that thick bush represented a disorganised chaos that was controlled through the use of cartography and measurements.[49]

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46 Boyce, *Van Diemen's Land*, 105.

47 Edward Cavanagh and Lorenzo Veracini, 'Editors Statement', *Settler Colonial Studies* 3, no. 1 (2013): 1–1; Patrick Wolfe, 'Settler Colonialism and the Elimination of the Native', *Journal of Genocide Research* 8, no. 4 (2006): 387–409; Lorenzo Veracini, 'The Imagined Geographies of Settler Colonialism', in *Making Settler Colonial Space: Perspectives on Race, Place and Identity*, ed. Tracey Banivanua-Mar and Penelope Edmonds (Basingstoke: Palgrave Macmillan, 2010); Penelope Edmonds and Jane Carey, 'Chapter 25: Australian Settler Colonialism over the Long Nineteenth Century', in *The Routledge Handbook of the History of Settler Colonialism*, ed. Edward Cavanagh and Lorenzo Veracini (London: Routledge, 2016), 371–89; Tracey Banivanua-Mar and Penelope Edmonds, eds., *Making Settler Colonial Space: Perspectives on Race, Place and Identity* (Basingstoke: Palgrave Macmillan, 2010); Tracey Banivanua-Mar and Penelope Edmonds, 'Chapter 14: Indigenous and Settler Relations', in *The Cambridge History of Australia 2 Hardback Volume Set*, ed. A. Bashford and S. Macintyre (Cambridge: Cambridge University Press, 2013), 342–66.

48 J Brian Harley, 'Rereading the Maps of the Columbian Encounter', *Annals of the Association of American Geographers* 82, no. 3 (1992): 522–42; Norman Etherington, *Genocide by Cartography: Secrets and Lies in Maps of the Southeastern African Interior, 1830–1850* (University of the Western Cape, 1999); Banivanua-Mar, 'Settler-Colonial Landscapes and Narratives of Possession'.

49 Colonial uses of cartography, and the literature surrounding this topic, are further discussed in Chapter Three. G. Byrnes, *Boundary Markers: Land Surveying and the Colonisation of New Zealand* (Bridget Williams Books, 2001).

As the land was charted, settlers moved outwards from the urban centres of Hobart and Launceston with an immediate impact on the Aboriginal nations, as the original inhabitants were forcibly excluded from the lands they had been using for millennia. Research that relies primarily on official documents tends to focus on what ought to have happened, or what the government reported, rather than interrogating the experiences of those who lived it.[50] As has been discussed, this approach has been rejected by many historians, including Karskens and Griffiths in various Australian studies, but Tasmanian history has also seen a return to less traditional sources and methods.[51] Researchers such as Marie Fels have used less formal sources to reveal that the expansion of settlers occurred concurrent with a shift from isolated confrontations over access to kangaroo, to outright war. This was driven as the determination of the British to rid the isle of its Aboriginal inhabitants increased.[52] Some of the first large-scale academic discussion to look beyond the government records and to the options and necessary decisions made by ordinary people in Van Diemen's Land was made by Hamish Maxwell-Stewart in his PhD thesis.[53] In focussing on the bushrangers and convicts, Maxwell-Stewart placed a micro-level discussion of relationships between individuals and events on particular properties within the broad political and social context of the island.

One weakness of this approach, and one found in many studies of Van Diemen's Land, is the tendency to presume a form of regional homogeneity across the island. This assumption that all regions developed the same way, and that all settlers faced the same problems, has clouded the distinction between riverine intensive and open extensive farming. The

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50 For example see: T. D. Semmens, 'Food and Agriculture in the New Colony of Van Diemen's Land, 1803 to 1810', *Papers and Proceedings of the Royal Society of Tasmania* 122, no. 2 (1988): 19–29. This article adopts colonial language of 'improvement' and 'crude agricultural methods', and relies on data about imported foods, ignoring the significance of locally-sourced shellfish and kangaroo for the early Van Diemonian colony. While it gives a good overview of governmental priorities, it only tells a part of the tale of food and adaptation in the colony. Compare this to Marie Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11', *Tasmanian Historical Research Association Papers and Proceedings* 29 (1982): 47–79., who examined the methods and impact of kangaroo hunting during the same period, and the image of a hungry colony is still seen, but moderated to better reflect human responses to the new environment.

51 Arguably this is a return, as the first broad history of the island (West, *The History of Tasmania*.) was based in part on oral testimonies, as West was writing within living memory of the initial Risdon Cove camp. For examples of mainland Atkinson, *Camden*; Karskens, *The Rocks*; Griffiths, *Forests of Ash: An Environmental History*; Barkley-Jack, *Hawkesbury Settlement Revealed*; Karskens, *The Colony*.

52 Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'; N. Clements, *Black War: Fear, Sex and Resistance in Tasmania* (St Lucia: University of Queensland Press, 2014).

53 Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'; Hamish Maxwell-Stewart, 'The Bushrangers and the Convict System of Van Diemen's Land, 1803–1846' (University of Edinburgh, 1990).

differences between those claiming these lands have also then been obfuscated, a problem this research seeks to resolve. Sharon Morgan's comprehensive analysis of European settlement in Van Diemen's Land, *Land Settlement in Early Tasmania: creating an Antipodean England*, adheres to this idea of regional homogeneity.[54] Morgan argued that the settlers adapted to local circumstances, but were consistently informed by their British roots, and never entirely rejected the notion of recreating an 'Antipodean England'. Morgan's research illustrated the patterns of settlement, moving out from the urban centre, but it was intent on broad brushstrokes rather than individual circumstances. While far from a series of case studies, this research seeks to apply a more focussed lens in an attempt to uncover regional and social differences that might be lost in a larger macro approach.

James Boyce questioned the extent to which former convicts failed as cultivators of the land, while free emigrants succeeded.[55] Arguing that the emancipist grantees were changed by the land, Boyce told a heretofore hidden story of the lives of the ordinary people. While historians such as Morgan had recognised that the emancipist and free settlers produced different outputs, Boyce gave the work of the former convicts validity where previously their impact had been systemically undervalued.[56] In 1817, the colony underwent a transition, as free settlers were encouraged to emigrate, and both Maxwell-Stewart and Boyce acknowledged the effect this had on land use, and the future development and administration of the colony. The increasing number of free settlers saw the expansion of pastoralism and agriculture, as they sought to make a profit from the land, especially through wool exports. Boyce chose 1823–24 as the point at which this pastoral expansion (and the consequential war and social change) resulted in a shift to a new era, using it as a chapter break.[57] Maxwell-Stewart, however, argued that 1817 was the point of significant change – although the effects were not felt immediately, the transition in policy towards free settlement initiated an irreversible transformation.[58] Examining the timeline of

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54 Sharon Morgan, *Land Settlement in Early Tasmania: Creating an Antipodean England* (Cambridge: Cambridge University Press, 1991).

55 Boyce, *Van Diemen's Land*.

56 For example: Melville, *The History of Van Diemen's Land*; Hartwell, *The Economic Development of Van Diemen's Land, 1820-1850*; Fletcher, *Landed Enterprise and Penal Society*.

57 Boyce distinguished Part II: 'The Making of Van Diemen's Land 1808-23' from Part III: 'Van Diemen's Land Conquered 1824–38', Boyce, *Van Diemen's Land*. In other examples, Melville began properly with the arrival of Lieutenant-Governor George Arthur in 1824 and Hartwell dismissed the earliest years outright – Melville, *The History of Van Diemen's Land*; Hartwell, *The Economic Development of Van Diemen's Land, 1820-1850*.

58 See Chapter Five: part two discusses the grain and livestock markets to 1817, part three focusses on market change from 1817. Maxwell-Stewart, 'The Bushrangers and the Convict System'.

settlement, almost grant by grant, shows the difference between the emancipist and free settler grants, but also the continuity of particular requirements and mechanisms for ensuring productivity on the land.

The final question this thesis addresses is how European land settlement patterns can be used to extrapolate detail of the Aboriginal landscape they overwrote, particularly when little explicit contemporary description exists today. Studies of Aboriginal land use have been infrequent, and have drawn varied conclusions, although European speculation dates back to 1642.[59] Initially, the millennia of Aboriginal farming were not recognised by the Europeans, who were guided by Lockean principles about what constituted land ownership. The person who cultivated and improved the land was considered to be the legitimate owner. As the Europeans did not recognise the extent of farming or landscape adaptation by the Tasmanian Aborigines they claimed ownership for themselves.[60] By refusing to acknowledge the existence of non-European agriculture, they could lay their new settlements over the landscape without heed to the former occupants. This led to increased hostilities between the two peoples vying for control over the land. As Marie Fels argued, in the earliest years this was driven by access to the macropod populations rather than the fire-stick farmed land they grazed on.[61]

It was Rhys Jones who first coined the term 'fire-stick farming' as he sought to best describe Aboriginal farming methods across Australia.[62] More recently Bill Gammage argued that all of Australia was managed as the 'biggest estate on earth', with varying fire regimes practised across its entirety.[63] Building on the work of previous researchers, Gammage argued that Aboriginal people developed region-appropriate land management

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59 Abel Tasman first sighted the island in 1642, and recorded his speculation about the inhabitants. Abel Tasman, 'Abel Tasman's Journal of His Voyage of Discovery 1642–1643', trans. Brian Hooker, 2002, http://www.abeltasman.org/journal-tasman.html. A review of the literature about fire-stick farming is found in Chapter Six. For an example of a negative view about the capabilities of Australian Aboriginal people to fire-stick farm, see: D. R. Horton, 'The Burning Question: Aborigines, Fire and Australian Ecosystems', *Mankind* 13, no. 3 (1982): 237–252. For example of a positive view, see: Bill Gammage, *The Biggest Estate on Earth: How Aborigines Made Australia* (Crows Nest: Allen & Unwin, 2011). For an example of Indigenous land use in other places see: William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England*, first revised (New York: Hill and Wang, 2003).

60 J. Locke, *Two Treatises on Government*, Reprint, Library of American Freedoms (R. Butler, 1821), 209–30.

61 Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'; see also: Boyce, *Van Diemen's Land*, 53–60. Macropods include kangaroos and wallabies, and other plant-eating marsupials. Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'; See also: Boyce, *Van Diemen's Land*, 53–60.

62 Rhys Jones, 'Fire-Stick Farming', *Australian Natural History* 16, no. 7 (1969): 224–228.

63 Gammage, *The Biggest Estate on Earth*.

techniques, many of which altered the landscape in ways which aided subsequent European expropriation.[64] This involved creating a landscape to suit both everyday and symbolic purposes. Through the systematic use of fire, the Tasmanian Aborigines (as well as those on mainland Australia) moved and cleared rainforest across the land and set up 'templates' – clearings that would attract particular animals. These templates followed a practice known as 'ecological tethering', described by archaeologist Richard Cosgrove and others as a way to ensure some predictability and reliability for hunters.[65] Some of these templates survive today, and more discussion on the debates about, methods of, and the implications for the colonial period is had in Chapter Six.

Lyndall Ryan focussed on the survival of the Tasmanian Aboriginal people after 1803, arguing that the arrival of the Europeans did not represent a complete cessation of Aboriginal culture and land management.[66] Ryan observed some of the differences between the nine different nations that were located across Tasmania, but like Ian McFarlane, Murray Johnson, and Nick Clements (among others), her emphasis lay in examining the devastating impact of the Europeans on one of the world's oldest continuing cultures.[67] Ryan used governmental primary sources, such as reports and letters, along with archaeological evidence, to build up an image of life for the Tasmanian Aborigines during the nineteenth century. The first version, *The Aboriginal Tasmanians*, included a map of the nine Aboriginal nations of Tasmania, which was then updated for the 2012 edition, *The Tasmanian Aborigines: a history since 1803*. This map is based on a combination of historical sources (particularly Robinson's journals), environmental factors (rivers and mountains), with gaps filled by approximations.[68] The difficulties of assumed accuracy in historical

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64 Gammage explicitly notes he is building on the work of R.C. Ellis, Sylvia Hallam, Bill Jackson, Rhys Jones, Peter Laatz, Duncan Merrilees, Eric Rolls and Ian Thomas, but Appendix 1 also summarises some of the arguments he has heard against his argument. Gammage, 3; 325-42.

65 Richard Cosgrove, Anne Pike-Tay, and Wil Roeboecks, 'Tasmanian Archaeology and Reflections on Modern Human Behaviour', in *Southern Asia, Australia and the Search for Human Origins*, ed. R. Dennell and M. Porr (Cambridge University Press, 2014), 175–88.

66 Ryan is not the only person to make this argument, but her first edition (*The Aboriginal Tasmanians*.) provided some of the first comprehensive analysis of the immediate aftermath of colonisation. Ryan, *Tasmanian Aborigines*.

67 Clements, *Black War: Fear, Sex and Resistance in Tasmania*; Johnson and McFarlane, *Van Diemen's Land: An Aboriginal History*. See also: Patsy Cameron, *Grease and Ochre: The Blending of Two Cultures at the Colonial Sea Frontier*, Studies in the History of Aboriginal Tasmania (Fullers Bookshop, 2011); Bruce Pascoe, *Dark Emu: Black Seeds - Agriculture Or Accident?* (Broome: Magabala Books, 2014).

68 Chapter One of Ryan, *The Aboriginal Tasmanians*, 5–46. See also: Cameron, *Grease and Ochre: The Blending of Two Cultures at the Colonial Sea Frontier*, 16.

cartography is discussed in Chapter Three, but the regions have been broadly accepted by the Australian Aboriginal community.[69]

Together, the works of Ryan and Gammage give a multi-faceted impression of Aboriginal land management when the British arrived in Van Diemen's Land.[70] Gammage's research is primarily about the big picture, as he argued for a widespread use of complementary fire-stick farming techniques, while Ryan gave the regional histories for Tasmania. By taking this knowledge and combining it with data about European land preferences, new understandings can be achieved. HGIS allows the historian to explore the environment systematically, drawing together disparate sources.

Three case studies

This research has focussed on three key areas of settlement, drawing on others where they contribute additional information, or to test the principles discovered in the initial analysis. The three locations were chosen because they were first opened for settlement at different times, had a reliable supply of data from a range of sources, and the Land District Charts (LDC) still showed the names of the original grantees.[71] The areas were New Norfolk, Bothwell and the region between Ross in the southern midlands and Evandale in the northern midlands of Tasmania. The background of these areas is given as they are discussed more fully later in the thesis, but in brief:

- New Norfolk was initially established in 1807 as a settlement for former convicts removed from Norfolk Island. This section was made up of small land grants along the edges of the Derwent and Back Rivers. It expanded into Macquarie Plains in the late 1810s with the arrival of free settlers who alienated large grants. There was a brief attempt to call the township Elizabeth Town.

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69 For example see David R. Horton, 'AIATSIS Map of Indigenous Australia', Australian Institute of Aboriginal and Torres Strait Islander Studies, 1996, https://aiatsis.gov.au/explore/articles/aiatsis-map-indigenous-australia. This map uses the original boundaries proposed by Lyndall Ryan (and Robert Anders, her GIS technician), but demonstrates the national acceptance of them in principle.

70 Ryan, *Tasmanian Aborigines*; Gammage, *The Biggest Estate on Earth*.

71 A description of these and other sources used is found in the following chapter.

- The first settlers arrived in Bothwell in the early 1820s, calling it the Clyde River settlement. Most of the settlers had arrived free, and were able to claim large acreages from the beginning.

- In 1807 the route between Hobart and Launceston was first surveyed, and within five years a rough track between the two towns was gaining traffic. Several way stations and military posts were established from this time, but the majority of land granting dates from 1817. Evandale at the northern end has the smallest grants, having been alienated earliest, when allowances were smaller. The grants get larger further south, in the areas which are more distant from Hobart and Launceston.

Figure 1: Case study regions.

It was hoped that the land around Sorell / Pittwater or Port Dalrymple / George Town would be used, but their entries on the LDC had been extensively updated throughout the nineteenth and early twentieth centuries, destroying much of the information from the earlier period. Norfolk Plains was not included in the main dataset because New Norfolk was chosen as representative of the emancipist settlements, although the area was subsequently incorporated into some analysis. The boundaries for these regions were set according to the district boundaries shown on the LDC.

Chapter Two:
Geographic Information Systems

Geographic Information Systems (GIS) have a long history of use in archaeology, but have only come to the attention of historians in the past fifteen years. While maps have long been a feature of archaeological reports and works of history, their use to systematically analyse historical evidence is a relatively recent development. In 2002 Ian N. Gregory wrote, 'There is extensive literature on GIS but the literature on using GIS for historical research is currently limited.'[72] Since then the use of historical GIS (HGIS) has become more common in some circles. Two researchers in particular have had a significant influence on this, Gregory and Anne K. Knowles.

In 2002 Knowles edited a collection of short essays on the emerging uses of GIS in historical research.[73] Written by geographers, historians, sociologists and other researchers, this book demonstrates both the simple and complicated uses for GIS in historical research. In Chapter Two, Benjamin C. Ray describes trying to find a more interesting way to teach the Salem Witch Trials, taking data from the historical documents to pull together a new picture of events as they unfolded. He explains that GIS was new technology for him, but by locating people and events on the map he could find new connections between the parties in the trials which he had not previously identified.[74] At the other end of the spectrum is Amy Hillier's discussion on the use of statistics with GIS to analyse the relationship between insurance companies' 'redlining' (refusing to insure) regions of Philadelphia and lower development levels.[75]

In 2002 Gregory published *A Place in History: A Guide to Using GIS in Historical Research*, a more technical resource for applying GIS to historical data sets.[76] While the software has advanced in fifteen years, the technical explanations are still valid and well-explained. Knowles locates Gregory's book as a companion for hers, to cover both the conceptual and technical theories. These two books are the first to systematically investigate the use of GIS in history, and have had a substantial influence on the development of the field.

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[72] Originally published (2002) online at http://hds.essex.ac.uk/g2gp/gis/, in print: Ian N. Gregory, *A Place in History: A Guide to Using GIS in Historical Research* (Oxford: Oxbow Books, 2003), http://hds.essex.ac.uk/g2gp/gis/.

[73] Anne Kelly Knowles, ed., *Past Time, Past Place: GIS for History* (USA: ESRI Press, 2002).

[74] Benjamin C. Ray, 'Teaching the Salem Witch Trials', in *Past Time, Past Place: GIS for History*, ed. Anne Kelly Knowles (California: ESRI Press, 2002).

[75] Amy Hillier, 'Chapter 6: Redlining in Philadelphia', in *Past Time, Past Place: GIS for History*, ed. Anne Kelly Knowles (USA: ESRI Press, 2002), 79–92.

[76] Gregory, *A Place in History*.

More recently two journals have produced issues dedicated to the use of GIS in historical research – *Historical Geography* in 2005 and *Social Science History* in 2011.[77] Both noted the breadth of topics open for GIS analysis. In the introduction to the *Historical Geography* issue, Knowles wrote 'what unites the authors in this volume is a new intensity of interest in geographical inquiry and the use of geographical evidence to understand the shaping influence of geography on history.' This issue demonstrated some of the applications of GIS to historical research, but also highlights some of the dangers and problems for historians branching into disciplinary areas in which they had not been specifically trained. A particularly significant concern is the manner in which mapping might cause assumptions to be made about the spatial properties of data, by making uncertain data appear to be definite. The process requires that vague boundaries and points are given a specific location, thus conferring undeserved confidence in 'fuzzy data'.[78]

This undeserved confidence can be particularly problematic when multiple datasets are combined, each with its own level of accuracy. This research uses spatial data collected over a two-hundred year period, each set created for a particular purpose and using the equipment available at the time. Reconciling 1820s land grant charts with 1980s soil maps has been one such challenge tackled here.

This issue of *Historical Geography* highlighted the manner in which exploring the geographical distribution of variables in complex datasets could be meaningful, despite the problems. Donald A. DeBats and Mark Lethbridge, for example, combined GIS with other statistical analysis to examine both 'city-wide and highly localised patterns' in two nineteenth-century urban areas in the United States. This article tested the use of GIS in analysis of social change and structures, by combining extensive voting data with geographical information. While rich in statistical detail, it was particularly effective at highlighting the power of GIS as an analytical tool, although it also illustrated the enormous amount of work required for this type of analysis, through collecting, georeferencing and analysing the data.[79]

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77 *Historical Geography* 33 (2005); *Social Science History* 35, no. 4 (2011).
78 Anne Kelly Knowles, 'Emerging Trends in Historical GIS', *Historical Geography* 33 (2005): 7–9.
79 Donald A DeBats and Mark Lethbridge, 'GIS and the City: Nineteenth-Century Residential Patterns', *Historical Geography* 33 (2005): 78–98.

In 2008 another volume of essays demonstrating various uses of HGIS was published, *Placing History: How GIS is changing historical scholarship*.[80] Again edited by Knowles (and Amy Hillier), this publication was intended to push scholars beyond the early discussion of *Past Time, Past Place* (2002). By revisiting some of the topics of the former volume, this book highlighted the advances made in six years. It covers several specific projects, including an analysis of the site of Gettysburg, and examination of the causes of the 1930s Dust Bowl, as well as discussion on methods. Robert Churchill and Hillier asked what the point of teaching GIS is, and connected it to the notion of engaging 'technology-savvy' students with history in new and interesting ways. GIS requires the historian to organise evidence in logical ways, and Hillier noted that while writing is still central to historical research, GIS helps students 'complement good writing with visual representations'. In an ever-increasingly technological age, these methods are one way of breaking out of the 'traditional' mould of tertiary history education. History may be about things that have gone before, but that does not mean its methods also have to be of the past.

Knowles' prediction, that there would be enough scholarship in future years to create publications on one theme, was realised with the 2011 *Social Science History* special edition which focused on the use of GIS in urban history.[81] In their introduction to this edition DeBats and Gregory suggested that the projects outlined within the issue indicated that 'GIS is encouraging a revival of urban history.'[82] Each article was heavily focussed on the methodology employed, emphasising the enormous amounts of work required to create a spatial database, but highlightling the degree of flexibility that can result from the use of spatial analysis. For example, Aaron Raymond's contribution about the removal of Denny Hill from the core of Seattle gave a detailed description of the steps taken, and rationale behind the dataset's parameters. Crucially he argued that although the setup used in this project made for a 'cluttered' shapefile, the end result was more time-efficient and less prone to errors, and therefore worth the clutter.[83] Even more specific publications have appeared, with books such as Brian Donahue's 2004 *The Great Meadow* and Gregory's (and others) 2013 *Troubled Geographies* using HGIS to examine particular locations. Donahue

[80] A.K. Knowles and A. Hillier, *Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship* (Redlands: ESRI Press, 2008).

[81] *Social Science History* 35, no. 4 (2011).

[82] Donald A DeBats and Ian Gregory, 'Introduction to Historical GIS and the Study of Urban History', *Social Science History* 35, no. 4 (2011): 461.

[83] Aaron Raymond, 'Denny Regrade, 1893-2008: A Case Study in Historical GIS', *Social Science History* 35, no. 4 (2011): 571–97.

tracked the development of the settlement of Concord in Massachusetts, mapping out land-use and changing resource access over time.[84] Gregory used analytical charts to tell the history of 'The Troubles' in Northern Ireland, placing them within a political, religious and environmental context of the entire Irish island.[85] *Spatio-Temporal Narratives*, published in 2014, used HGIS to analyse global trading networks between 1500 and 1800 by examining both the application and the results of the methodology.[86]

A more recent collection of essays on HGIS is 2014's *Toward Spatial Humanities*.[87] In this volume the editors, Gregory and Alistair Geddes, sought to demonstrate the potential for almost unlimited application of GIS to historical research. In the introduction, Gregory and Geddes acknowledged that there are sources that cannot be spatially referenced, but emphasised that these sources should not be excluded from the research, that 'lived experience' is crucial to understanding newly discovered spatial patterns. To demonstrate the broad use of HGIS, this book examined six different projects, dividing them into those that use big data to engage with 'spatial history', and those that seek to develop other methodological approaches. In examining the effect of railway construction on agriculture in Britain and France, Robert Schwartz and Thomas Thevenin combined parish and commune data with agricultural statistics and railway histories to write a spatial history of the subject. They cautioned practitioners of HGIS not to abandon the story in favour of methodology. Andrew Beveridge examined racial segregation in nineteenth and twentieth-century US, using census data to track the movement of African-Americans from the south to the north, and then within the urban centres. This research, Beveridge explained, took an established methodology and applied it to a significantly larger timeframe than had previously been possible. Niall Cunningham looked at the long history of Ireland, placing 'The Troubles' within a longer context of conflict, religion, and place. In the first essay on expanding the methods to new processes, questions and audiences, Humphrey Southall discussed the appeal of the Great Britain HGIS project for the public, and the funding implications of that. He focussed on the demographic and health, archival indexing, environmental management and conveyancing benefits of this project, each with a very

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84 Donahue, *The Great Meadow*.

85 I.N. Gregory et al., *Troubled Geographies: A Spatial History of Religion and Society in Ireland*, The Spatial Humanities (Indiana University Press, 2013).

86 A.C. Solana, *Spatio-Temporal Narratives: Historical GIS and the Study of Global Trading Networks (1500–1800)* (Cambridge: Cambridge Scholars Publisher, 2014).

87 Ian Gregory and Anne Geddes, *Toward Spatial Humanities: Historical GIS and Spatial History* (Bloomington: Indiana University Press, 2014).

particular interest group and contemporary significance. A total shift in time, place and topic then had Elijah Meeks and Ruth Mostern writing about the movement of state power and territory in tenth to thirteenth century China as they demonstrated the development and use of an online gazetteer covering the 'frequently changing places' of this period's Song Dynasty. Finally, this book returns to Britain, and focusses in on Liverpool in the twentieth century. Julia Hallam and Les Roberts used HGIS to track ideas of 'the local' and 'the regional', using films shot in the region. They asked about the connection between archival images and cultural landscapes, and showed that these methods are capable of informing critical understandings of this link. *Toward Spatial Histories* revealed the breadth of potential for HGIS, while also reminding the reader of the danger of becoming too focussed on the methods and spatial aspect to the detriment of the story they contribute to.

Animated maps and specific historical mapping projects are also becoming increasingly common. In 2014 the Bartlett Centre for Advanced Spatial Analysis (UCL) released a video of the Evolution of London, mapping heritage-listed sites to show the growth of the city since Roman habitation.[88] The New York Public Library hosts a project called the NYPL Map Warper, that gives the public access to hundreds of historical maps. Not only are individuals able to look at the charts in high detail, they are encouraged to georeference them, and the database has an ever increasing number of maps that can be searched and viewed by location.[89] Similarly, collections of regional historic maps are becoming available online – the county of Norfolk has digitised sets of maps from the eighteenth century onwards and made them accessible through an interactive web viewer.[90] The National Library of Scotland has likewise made all of the first edition Ordnance Survey charts available for the UK, along with other smaller sets.[91] In 2017 Giorgia Gatta and Gabriele Bitelli experimented with integrating high quality HGIS into GoogleEarth, to create an explorable history of the city of Bologna.[92]

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88 'The London Evolution Animation', 2014, https://www.youtube.com/watch?v=NB5Oz9b84jM.

89 New York Public Library, 'NYC Space/Time Directory', 2015, http://spacetime.nypl.org.

90 Norfolk County Council, 'Historic Maps', 2012, http://www.historic-maps.norfolk.gov.uk; National Library of Scotland, 'Maps', accessed 21 February 2017, http://maps.nls.uk.

91 National Library of Scotland, 'Maps'.

92 Giorgia Gatta and Gabriele Bitelli, 'A Historical GIS for the Comparison of Past and Present Views: Bologna, Yesterday and Today.', *E-Perimetron* 12, no. 3 (2017): 102–8. For other discussion and analysis on different platforms (free and paid) available see: Nicholas Terpstra and Colin Rose, *Mapping Space, Sense, and Movement in Florence: Historical GIS and the Early Modern City* (Routledge, 2016); Ian Gregory and Patricia Murrieta-Flores, 'Geographical Information Systems as a Tool for Exploring the Spatial Humanities', in *Doing Digital Humanities: Practice, Training, Research*, ed. Constance Crompton, Richard J. Lane, and Ray Siemens (Routledge, 2016).

The use of GIS to visually demonstrate historical themes covers a diverse range of themes, as Knowles notes in her introduction to the dedicated issue of *Historical Geography*.[93] Twenty years ago, journals contained hand-drawn maps of sites; today websites and videos make this information interactive and more accessible. In 1965 the Land and Surveys Department, Hobart published the *Atlas of Tasmania*. The purpose of this atlas was to demonstrate the economic resources of Tasmania, but it also contains some historical data, including a statistical breakdown of land alienation in 1824.[94] In Tasmania the most complete set of historic charts, the Land District Charts, has been made available through the State Department of Primary Industries, Parks, Water and the Environment's (DPIPWE) online LISTmap resource.[95] These charts can be viewed alongside other modern datasets – population, boundaries, vegetation for example. Projects such as these challenge traditional ways of thinking about, and writing, history, as they demonstrate the legitimacy of charts as historical records. HGIS encourages historians to read these maps against the grain, to examine the circumstances of their creation, thus adding another layer to the story being told.

A definition of the technical terms used

In essence, GIS is a data linkage tool that enables researchers to join disparate records using spatial references as the common feature. The process of preparing data for spatial analysis is involved and time consuming, but yields quite remarkable results that can visually demonstrate conclusions and promote new understandings. There is a great difference between reading about the location of military station or land grant sizes and actually seeing them laid out on a map. Not only does such visualisation place the data

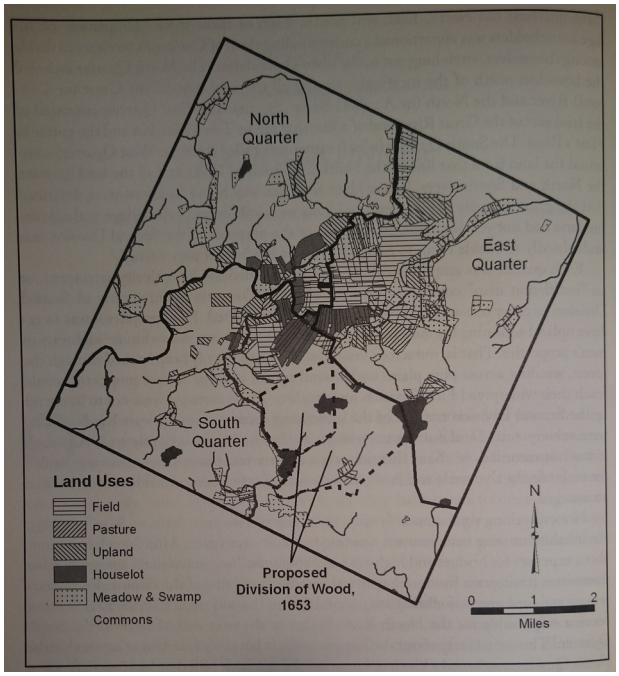

Figure 2: Division of land in Concord, Massachusetts, 1653 (Donahue).

[93] Knowles, 'Emerging Trends in Historical GIS', 7.
[94] John Lloyd Davies, *Atlas of Tasmania* (Hobart: Lands and Surveys Department, 1965), 43–45.
[95] Land Information Services Tasmania and DPIPWE, 'LISTmap', n.d., http://maps.thelist.tas.gov.au/.

within its geographical surroundings, it also contextualises each datapoint within the dataset. Transferring data from words to map points gives it an extra dimension that is not visible in lists and sentences. Figures 2 and 3 demonstrate two uses of HGIS in two different contexts. The first comes from Donahue's research, and is an example of maps used to illustrate and highlight information directly from the records, specifically here land-use in Concord, Massachusetts.[96] The second demonstrates the analytical power of attributing coordinates to data, as the Spatial Humanities team at Lancaster University combined datasets and ran spatial statistical analysis on them to explore historic patterns of disease and mortality.[97] The value of spatial analysis in historical research should not be underestimated.

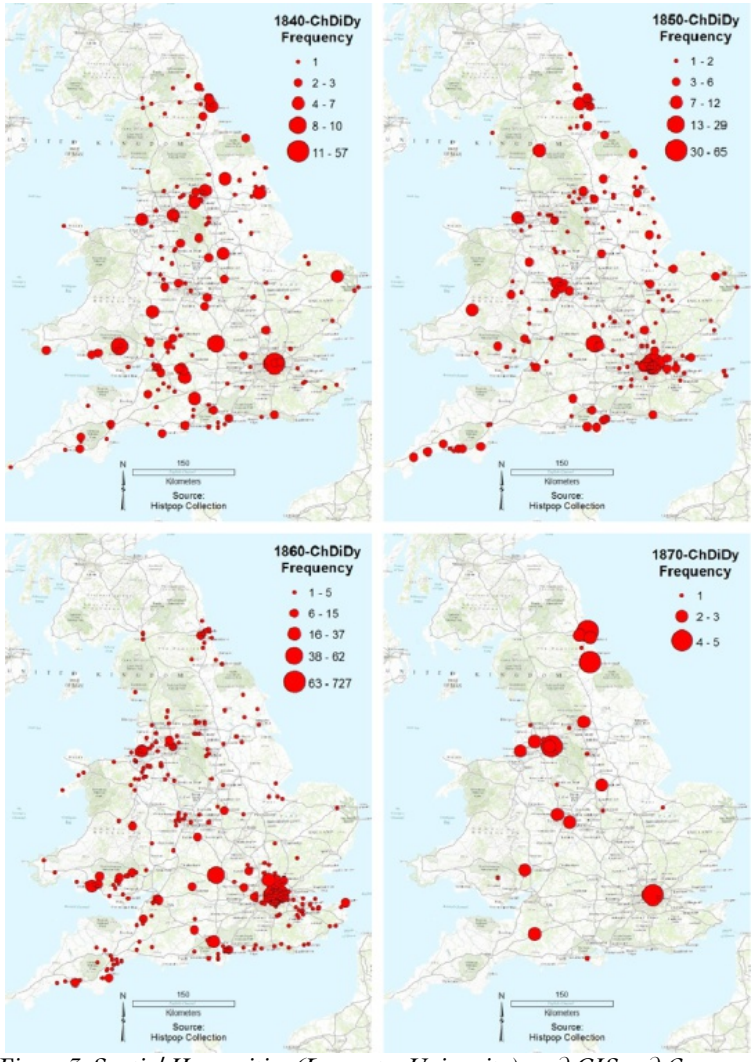

Figure 3: Spatial Humanities (Lancaster University) used GIS and Corpus Linguistics to map disease and mortality in Victorian England and Wales.

Just as map coordinates can give data an undeserved legitimacy, they are also impartial about the apparent significance of any given source. Where it can be easy to reject a source for any number of perceived flaws, HGIS allows these minor sources to be aligned with the archive and assessed in relation to other sources of information. These sources may have nothing in common other than spatiality, but they can then be aligned to reveal hidden patterns and the extent of change over time.

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96 Donahue, *The Great Meadow*, 104.

97 Patricia Murrieta-Flores et al., 'Automatically Analyzing Large Texts in a GIS Environment: The Registrar General's Reports and Cholera in the 19th Century', *Transactions in GIS* 19, no. 2 (1 April 2015): 296–320, https://doi.org/10.1111/tgis.12106.

Before explaining the process for the datasets used in this particular project, it is necessary to explain the terminology that accompanies historical spatial analysis. The base systems used, GIS, are used across the disciplines, and each has its own jargon. Many of the terms given here have broad application, but some apply particularly to the field of HGIS, or even specifically to the research conducted in this thesis.

Definitions

Layer: a map is created from a series of layers, each representing one data-set. The order of these can be reordered so the final image demonstrates a particular point. A typical map showing the land ownership and year of alienation (figure 4) shows the following layers (from background to foreground):

- Modern basemap of area[98]
- TIFF file of contemporary map[99]
- Vector file of boundaries, containing details about the owners and dates.

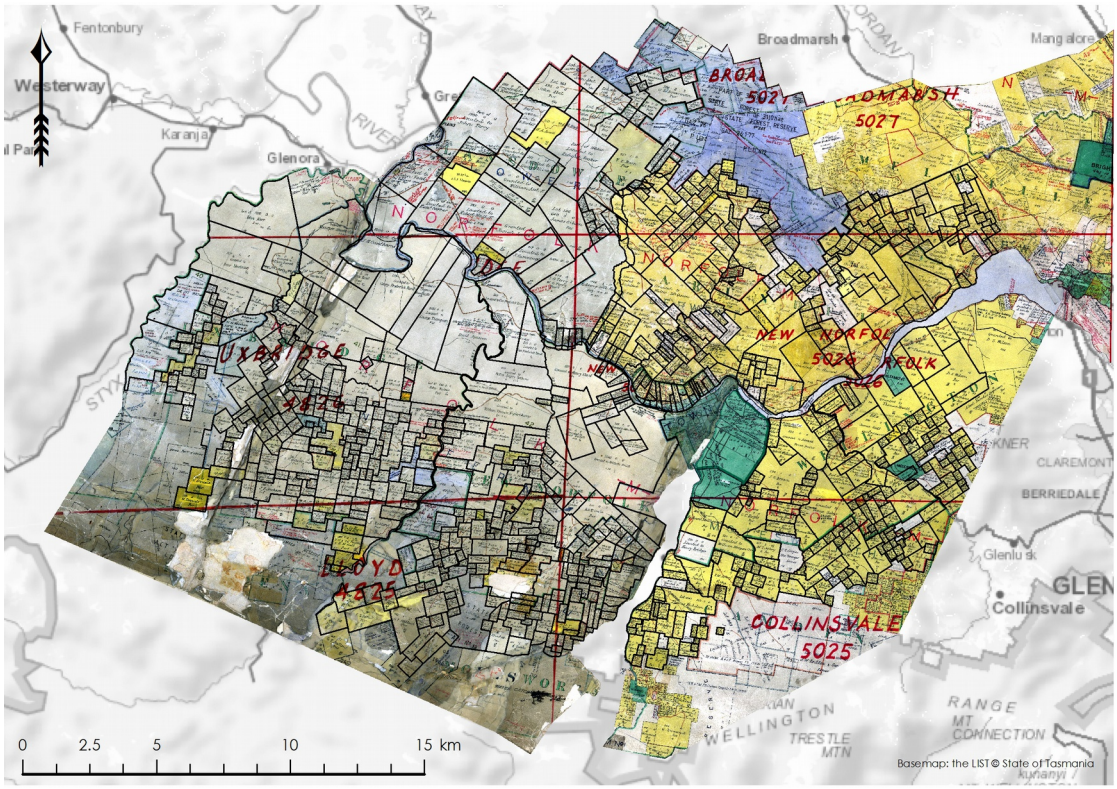

Figure 4: New Norfolk area, geo-referenced and recorded (basemaps: LISTmap).

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98 'LISTmap'.

99 *Land District Charts*, 1990 1900, 1990 1900, AF 820, TAHO, http://search.archives.tas.gov.au/default.aspx?detail=1&type=S&id=AF820.

Shapefile: a shapefile contains sets of lines, polygons and points that combine to create a data-set.[100] For each map in this study there are a number of shapefiles that record the outlines of field boundaries. Each point or line has an entry in a 'attribute table' that contains the calculated area of a field, and manually entered names, dates, and other information. This information is manipulated to calculate and display particular elements of the study.

Georeferencing: georeferencing refers to the process of giving coordinates to a new layer so that it will be correctly spatially located. In this study this was completed by using a basemap provided by the Land Information System Tasmania (The LIST), with the new layer (for example a TIFF of a contemporary map) laid over the top.[101] A point on the new layer (such as a church or distinctive river bend) is linked to the matching point on the basemap. This is repeated for a range of points across the area, and the new layer is reshaped so that it accurately shows the land it represents. The transformation is stored independently of the basemap, so the new layer can be seen and used on its own. Not only is the new layer correctly geo-located, but it can also then be used to give more accurate measurements – in this study, for instance, the area of individual plots of land is calculated automatically, and the accuracy of this is only possible because the map has been georeferenced and each plot shows the approximately realistic (scaled) size.

Event: Location specific events can be plotted onto the landscape. These include land transactions, military action, confrontations between Aboriginal people and settlers, or any other instance with a spatial factor.

The main sources and their management

This research brings together multiple sources, including charts, journals, official records, and books. Several sets of charts are central to the analysis presented here, although the circumstances under which each was created differ, requiring each to be handled in different ways. This section outlines the background to each of these sources, and details how they were manipulated to bring new light to the questions posed by this study.

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[100] Although 'vector file' is the general name for this file-type, this research uses 'shapefile' as the proprietary term of the software used, ESRI's ArcGIS. This research uses ArcGIS for Desktop, version 10.3, with an Advanced licence.

[101] 'LISTmap'.

Land District Charts

The first and largest set of charts is the Land District Charts (LDC), which are the only historic maps to systematically cover all of the Tasmania.[102] This set contains many names of the original (or very early) recipients of land grants, as well as the number of acres officially contained within the property and how they were held. Because of the consistency in recording this information, and its wide coverage, the LDC might be described as a foundational source. They do not, however, contain any dates. All record of when the land was originally alienated, resold, or measured has been removed from this record. This presented certain challenges, but as the following discussion of sources demonstrates, it is possible to attach dates to the majority of plots relevant to this study through careful cross-reference with other materials.

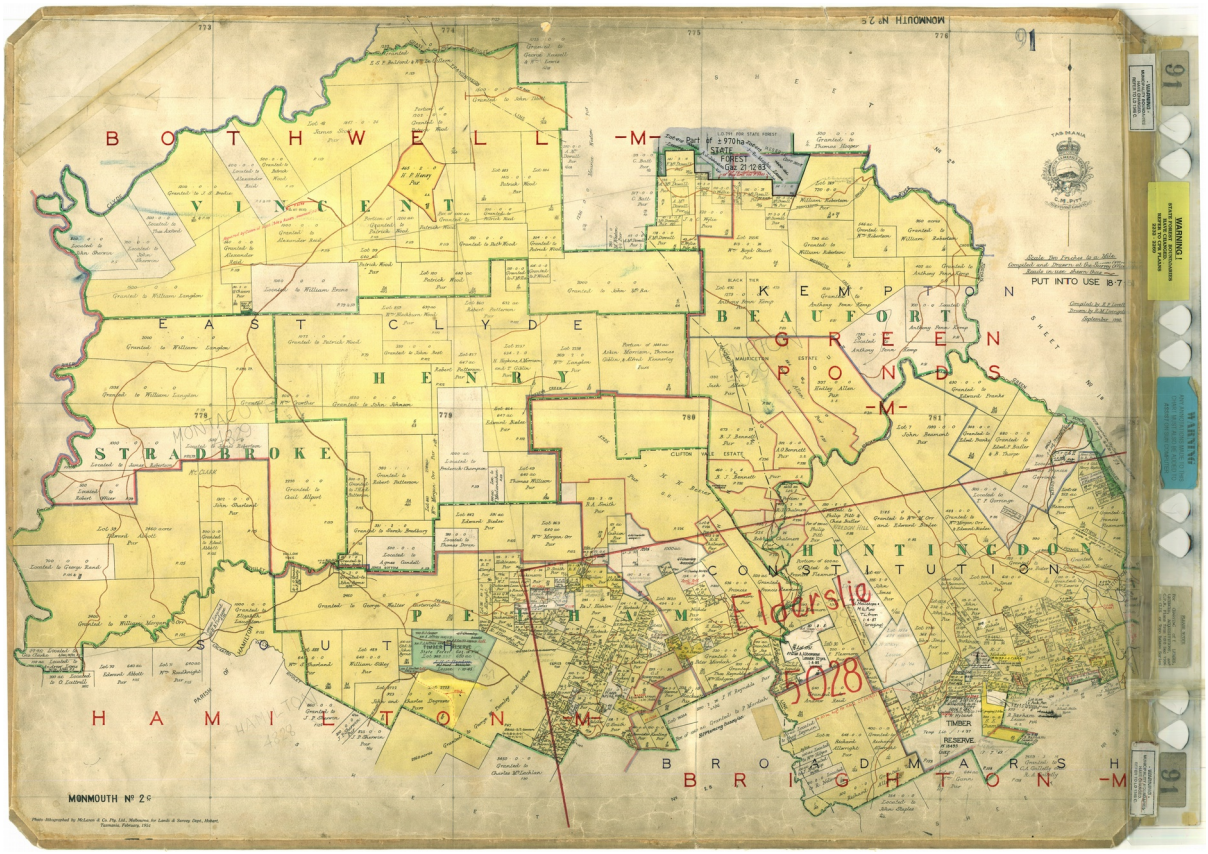

Figure 6: Example LDC sheet, including Bothwell (Monmouth 2C).

The LDC show land grants in acres, roods and perches, and this research retains the use of acres to maintain consistency and prevent conversion errors. A lot of the detail contained on these charts matches that found on another maps series, AF 396.[103] The dates on some of

[102] 'LDC'.

[103] 'County Maps' 1959 1810, AF 396, TAHO, http://search.archives.tas.gov.au/default.aspx?detail=1&type=S&id=AF396.

the charts in this latter set suggest the LDC series was started in the 1820s, with the information transcribed from AF 396 to the stylistically consistent LDC. The 1820s were a time of restructuring in the Survey Office, and organising land grants became a priority with the arrival of Lieutenant George Arthur and Surveyor General George Frankland to the colony.[104] Prior to this there are very few surviving charts, although those available have been used where possible for this study. The LDC reflect this growing concern to understand which lands were still available for alienation, and to catalogue who was occupying the acreages already transferred to private control. As Chapter Three demonstrates, the LDC often contained inaccurate measurements. Knowing the pressures on the Survey Office, it is plausible to assume that although these charts were redrafted and some information was updated, the majority of plots were not resurveyed. Many farms today contain acreages that follow the original grant boundaries, including extra acres (or square metres) seen on the LDC. DPIPWE holds the georeferenced LDC, and notes that they were only decommissioned in 1990.[105] Consequentially, they have been redrafted several times since their creation, with new features (such as government and hydro-electric land acquisitions) erasing details of former land use and ownership. The case studies in this research were chosen in part because they were intact on the LDC, with few alterations that affected the ability to locate the names listed in land sale and grant registers.

Figure 5: Georeferenced, uncropped Land District Charts of New Norfolk.

The LDC were provided as digital PDF or TIFF files by DPIPWE, and included extra detail (compass, cartouche, and archival annotations for example).[106] The first step, after converting the PDFs to TIFFs, was to georeference them by matching river bends, historic streets and other identifiable landmarks. They were then cropped to the relevant study

104 For example, see: Frankland, *Report on the Transactions of the Survey Department*.
105 Land Tasmania, 'Land District Charts Notes', 6 April 2016, https://www.thelist.tas.gov.au/app/content/data/geo-meta-data-record?detailRecordUID=56f107b0-f8b8-44b4-a86c-977bc5e2e050.
106 Graeme Harrington (DPIPWE), 'Land Survey Charts', multiple emails.

area. Figure 7 shows the area of New Norfolk, which is spread across four different sheets. In June 2014, eighteen months after this research commenced, the entire LDC was made available through the LISTmap website and server, and this resource has also been used when referencing locations outside the case study areas.[107] In January 2017 the equivalent charts detailing town land grants also became available.[108] The individual sheets are now held as digital images by the Tasmanian Archives and Heritage Office (TAHO).[109]

Once the sheets were georeferenced as accurately as possible, their data was extracted into a database. This process was time-consuming and dependent on the number, clarity and nature of the plots contained within the area. First, I drew polygons around each plot of land, leaving river edges and roads clear when possible, creating more visual reference points against modern maps (figure 7). Each of these polygons created a line in the attribute table, which I then filled with the data from the LDC (appendix nine). This included owner name, type of transaction, recorded acreage, and a column of automatically calculated acreage. When an area had been cleared of information, to make space for a 'State Park' or other feature, this was included for completeness of records. When the writing was illegible (usually through damage to the sheet), it was occasionally possible to work out a name from those letters that survived, but otherwise these spaces were left blank. Some properties were listed as a 'portion of', indicating that the landholder had several separate properties that made up their grant, and the individual sizes of each acreage had not been recorded. This note was included in the attribute table, so these plots could be excluded in later analysis. This process produced a grid of property outlines, with information about ownership and size of each property, that can be overlaid on any basemap or manipulated to demonstrate particular features. The

Figure 7: New Norfolk boundaries from the LDC on a modern map (LISTmap).

[107] 'LISTmap'.

[108] *Town Grant Charts*, LISTmap, accessed 21 February 2017, https://www.thelist.tas.gov.au/app/content/data/geo-meta-data-record?detailRecordUID=4241ae77-9047-4591-8dcf-306c4cbde034.

[109] 'LDC'.

area of each polygon was also calculated, to compare to the size recorded on the charts. This comparison revealed unexpected differences that are discussed in later chapters.

AF 396

To answer some questions posed by this research, it was essential to identify individual years in which land was surveyed, and by whom. Analysis of the LDC reveals discrepancies between the official and actual acreages, and patterns that could have been caused by concurrent events. Their lack of dates, however, made it impossible to know whether these patterns were caused by drafting errors or later changes to the boundaries. The second set of historic charts used in this research was the series AF 396, held by the TAHO, and available as high resolution jpegs from their online archive.[110] This series contains charts compiled from 1804 onwards, with Meehan's map of the Derwent River (*Monmouth 0*) the earliest. These are the only 'original' charts remaining from the colonial period, each showing the different style, priorities or interests of their surveyor. Some of the plots shown do not include the official acreage, and these plots were either excluded or in some cases the information was listed elsewhere. *Monmouth 3* (figure 8), shows the grants given to emancipists in New Norfolk, which could be linked to the 1819 Muster returns. *Monmouth 4* is one of two charts of the land south of Oatlands, and a direct comparison could be made with *Monmouth 65* which does contain the official plot size.[111]

Some charts in AF 396 were redrafted in the Survey Office, and it is not always clear who made a particular copy. It was assumed that even if they had been drafted by someone other than the initial surveyor, enough skill was taken to transcribe the details accurately. Multiple copies of charts were often made, or an area was remeasured several times, as in the example of Edward Lord's Lawrenny Estate on the upper Derwent River. Five charts exist of this property and its immediate surrounds, all but one dated to 1827, each showing

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110 'County Maps'.

111 James Meehan, *Monmouth 0: Plan of Settlement at Derwent River as Examined by James Meehan, Assistant to the Surveyor-General between 16/10/1803 and March 1804 by Order of Governor King*, 1804, 1804, AF 396/1/206, TAHO, https://stors.tas.gov.au/AF396-1-206; James Meehan and G.W. Evans, *Monmouth 3: Monmouth and Buckingham Allotments at Elizabeth Town and New Norfolk Approved by Lachlan Macquarie*, 1814, 1814, AF 396/1/210, TAHO, https://stors.tas.gov.au/AF396-1-210; Thomas Scott, *Monmouth 4: Green Ponds, Lovely Banks and Jericho*, 1824, 1824, AF 396/1/211, TAHO, https://stors.tas.gov.au/AF396-1-211; *Monmouth 65: Parish of Somerset*, 1829, 1829, AF396/1/273, TAHO, https://stors.tas.gov.au/AF396-1-273.

slight differences in the river bends and boundaries, as errors of previous surveyors were corrected.[112]

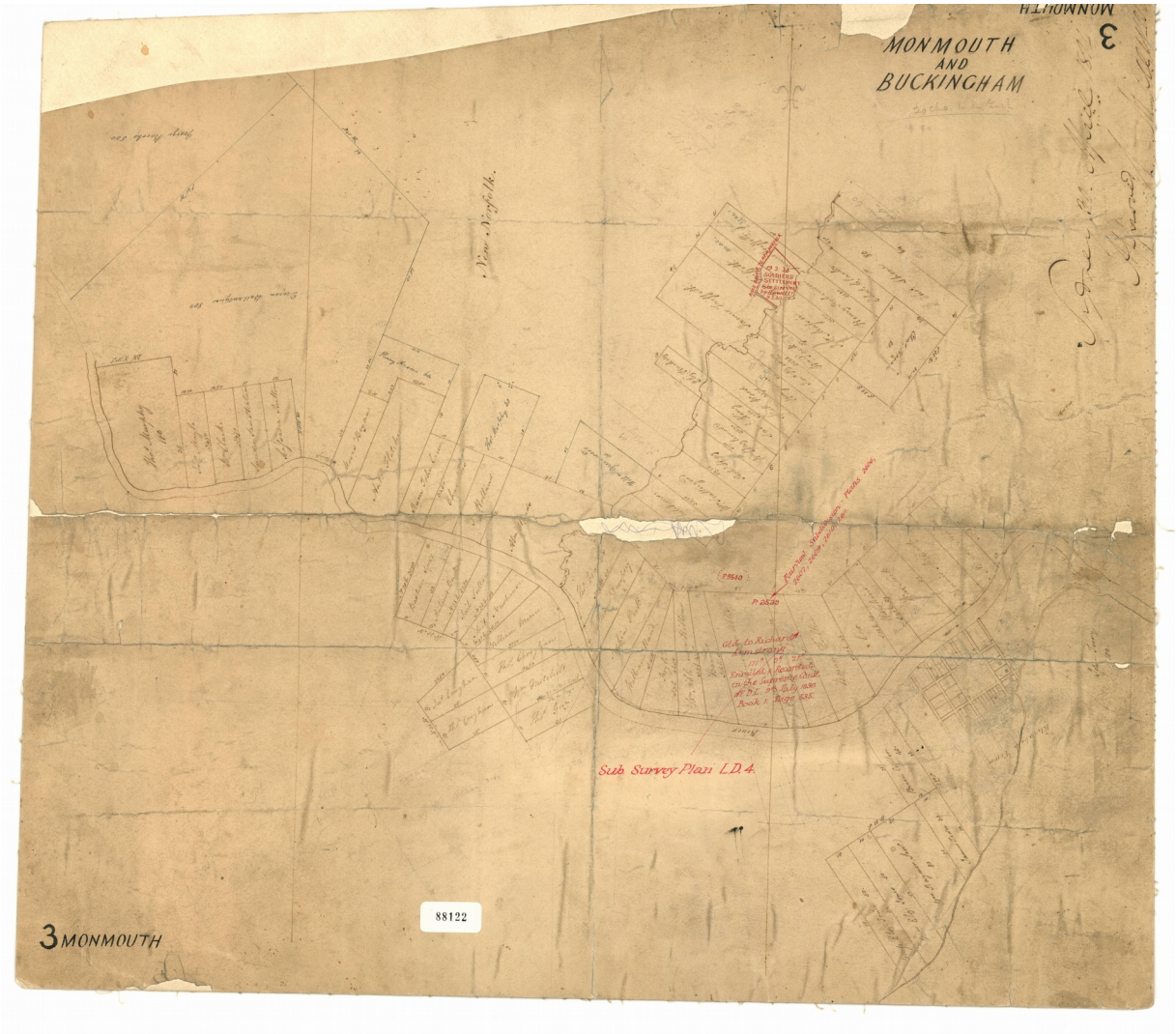

Figure 8: New Norfolk, 1814 (Monmouth 3).

The archival record states that the series ends in 1959. While the majority of maps in this series do include their dates of survey and drafting, the earliest charts are the exception and do not always display this information. Some of these early charts do list the surveyor, which narrows the period of their creation. Eleven charts in this series had specific dates

[112] Edward Dumaresq, *Cumberland 55: Lawrenny Estate*, 1827, 1827, AF 396/1/883, TAHO, https://stors.tas.gov.au/AF396-1-883; Edward Dumaresq, *Cumberland 56: Parish of Lawrenny*, 1827, 1827, AF 396/1/884, TAHO, https://stors.tas.gov.au/AF396-1-884; Edward Dumaresq, *Cumberland 58: Lawrenny*, 1827, 1827, AF 396/1/886, TAHO, https://stors.tas.gov.au/AF396-1-886; Edward Dumaresq, *Cumberland 59: Cumberland Estate*, 1827, 1827, AF 396/1/887, TAHO, https://stors.tas.gov.au/AF396-1-887; W. Wedge, *Cumberland 57: Parish of Lawrenny*, n.d., n.d., AF 396/1/885, TAHO, https://stors.tas.gov.au/AF396-1-885 does not list a date but it was surveyed by W. Wedge who was active from 1824 and Dumaresq (active between 1825-28) wrote 'This plan is incorrect' on it.

pre-1835 and covered similar areas to those extracted from the LDC.[113] These charts were georeferenced, and their information extracted into a series of polygons that, like the LDC data, contained the recorded and calculated acreage of each block. Several more were identified as being within the time, albeit without a precise year of measurement, and were used to enhance the evidence of the dated charts.

MUSTERS, LAND GRANT AND CONVEYANCE RECORDS

The colony of Van Diemen's Land was built on paperwork, and many decisions were meticulously recorded. An extensive archive survives, documenting the movement of people across the landscape. Initially land was granted, rather than sold, and the grants were recorded in musters and returns sent to the Colonial Office. The format of these documents changed from year to year, with musters in some years recording acres under cultivation (and details of the crops), while others list only whether a settler had come free or as a convict. Although the information contained varies in detail and quality, these documents can be pieced together to form a larger image of the colony over a thirty year period.

The initial database was transcribed from a dataset collected by Hamish Maxwell-Stewart in the 1980s, which combined records from the Historic Records of Australia, musters, and Land Conveyance Registers held by the Land Titles Office.[114] These lists were supplemented with several other sources, including LSD 354 from TAHO, which lists the grants given between 1803 and 1823.[115] Irene Schaffer's book *Land Musters, Stock Returns and Lists: Van Diemen's Land 1803–1822* formed another central database of information for the earliest period studied.[116]

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113 See the bibliography for a full list of the charts used in this research.

114 'Index to Land Conveyance Registers, 1827–35' n.d., Land Titles Office, Tasmania; 'Land Conveyance Register, 1827–35' n.d., Land Titles Office, Tasmania.

115 'Copies of Land Grants Issued' 1804, LSD 354, TAHO.

116 Irene Schaffer, *Land Musters, Stock Returns and Lists, Van Diemen's Land 1803–1822* (Hobart: St. David's Park Publishing, 1991).

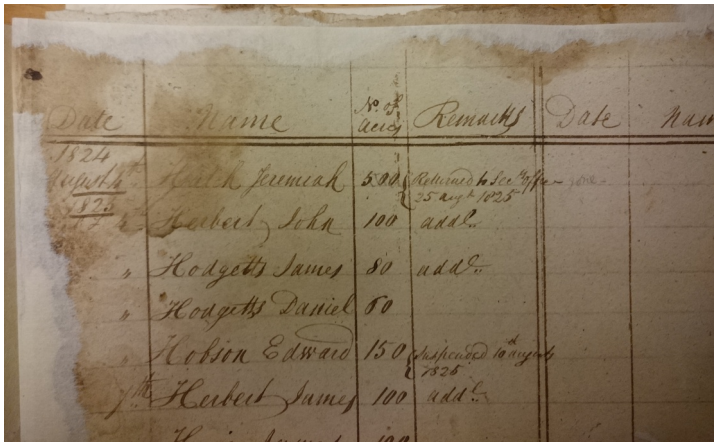

Figure 9: Page of AC 384/1/2, with minimal landholder information.

Some additional names were found in the sources that follow, but were only included if the information was reliable (for example when the Land Commissioners explained that X had unofficially swapped his grant with Y). Land granted between 1821 and May 1824 is listed in TAHO's AC384/1/1, while AC384/1/2 (May 1824 to December 1826) is in poor condition and unfortunately could not contribute anything to the analysis.[117] The front page is illegible, some pages are partially missing, and the lists do not include a district, meaning the land grants could be anywhere. Many landholders in the 1820s had multiple properties across the island, and having the district listed was crucial for correctly locating them. A duplicate set of land grant records covering the years 1824 to 1832 (LSD 409) has been transcribed by Thelma McKay.[118] These records, however, do not consistently list the date of granting, often instead using a date range covering several years. Some gaps could also be filled with reference to a document contained in *Parliamentary Papers (XXXII)* listing the 'Alienations of Crown Lands in New South Wales and Van Diemen's Land'.[119] This document also contained information gaps, the returns missing from 1822 to 1827 and 1832 in the case of Van Diemen's Land, making it supplementary rather than foundational.

Land sales only became common with the arrival of free settlers, in the early 1820s. The most comprehensive set of land conveyance records covers the period 1827 to 1835.[120] Crown land only became available for sale in 1828, so sales before this were between individuals and were probably recorded informally.[121] Evidence of these sales survives in name changes on charts, in newspaper advertisements, and in individual deeds kept in TAHO or family collections.

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117 'Register of Land Grants' 1821, AC 384/1/1, TAHO.
118 Thelma McKay, 'Register of Land Grants, VDL, 1824–1832' (Tasmania, 1994), LSD 409, TAHO.
119 *Alienation of Crown Lands, 1822–31, in New South Wales, Specifying the Nature of the Grant*, vol. XXXII.287, Parliamentary Papers, 1831.
120 'Land Conveyance Register, 1827-35'.
121 Frankland, *Report on the Transactions of the Survey Department*, 11.

Despite their coverage, these records do have gaps, and a number of landholders were found to be in location of an acreage in a particular year, without appearing on any of these lists. Undocumented land exchanges were common, with land passing through multiple hands between the name recorded on the muster and that on the charts. The difficulties pinpointing dates are therefore twofold – the date recorded is only that on which the grant was officially recognised, while the landholder may have been cultivating it for several years prior or had not yet started; and the records themselves are sometimes vague on detail. To counter these problems, all data was grouped into five-year brackets that straddled the busiest years for granting land. Several other sources were also used to supplement this data.

JOURNALS OF THE LAND COMMISSIONERS

In 1819 John Bigge was sent to the colony of New South Wales (and Van Diemen's Land) to evaluate the judicial establishments, agriculture and general success of the settlements.[122] One of his recommendations was that the colony should be divided into counties, hundreds and parishes, after the English system. These instructions were only enacted in 1825, when Lieutenant-Governor George Arthur oversaw the separation of Van Diemen's Land from the New South Wales colony. He commissioned three men to divide the island, value the waste and unoccupied land, reserve lands for public purposes, and appropriate land for churches and schools. Two of the three, Roderic O'Connor and Peter Murdoch, rode around the entire colony of Van Diemen's Land, conducting these duties and reporting back to Surveyor-General Edward Dumaresq. They submitted regular journals, which have since been transcribed and printed in one volume. These journals provide the names of landholders, their neighbours, descriptions of land, and occasional outbursts of rage at perceived colonial injustices. They also often describe the history of a plot of land, outlining the previous owners and how the current person came to hold it.[123] This is particularly useful for filling gaps in the official records, when acreages would be swapped unofficially and the transactions not recorded. The commissioners also recorded details about the system in operation, information that goes beyond the official instructions and regulations.

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[122] John Thomas Bigge, *Report on Agriculture and Trade in New South Wales*, Australiana facsimile editions; no. 70 (Adelaide: Libraries Board of South Australia, 1966), 1–6.

[123] Introduction, Anne McKay, ed., *Journals of the Land Commissioners for Van Diemen's Land, 1826–28* (Hobart: University of Tasmania in conjunction with the Tasmanian Historical Research Association, 1962).

Guides to Van Diemen's Land

Following the end of the Napoleonic Wars a number of guides were published for potential emigrants containing information about Van Diemen's Land. Among the first was W. C. Wentworth's *Statistical, Historical and Political Description of the Colony of New South Wales and its dependent settlements in Van Diemen's Land*. Wentworth was a born in New South Wales, and the second edition of his book, 'considerably enlarged and embellished', gave a vigorous defence of the colony, arguing for its superiority over others such as the United States.[124] Similar texts, each with its own agenda, continued to appear on the market (and indeed continue today in the form of travel guides and travel memoirs). These guides would usually walk the reader through the settlement, along the main roads and over the hills, describing the terrain, soils, inhabitants, prospects, and dangers, all while recounting anecdotes about the colony. Some, such as that written by Lieutenant R. N. Breton, claimed to be addressing the biases of other authors, giving the 'real' account of the colony without the gloss.[125] Whatever the motives of their authors, these guides give useful insight into the conditions of the colony, and the expectations of both inhabitants and visitors.

Van Diemen's Land Maps

Abel Tasman drew the first known maps of Van Diemen's Land, although they were incomplete, as he did not discover it was an island. The first charts to represent Van Diemen's Land as an island were made by Matthew Bass and George Flinders as they circumnavigated the island in 1798-9. This chart was reprinted with extra detail in 1814 and is one of the earliest charts that shows the early settlements of Hobart Town and Port Dalrymple, with exploration routes in between.[126] Other charts of significance used in this research include George William Evans' 1819 charts of the Derwent and Port Dalrymple settlements.[127] Several charts by Thomas Scott have been used, including *Van Diemen's Land 1824* (figure 10), *Military Chart 1826*, and *Van Diemen's Land 1830*. George Frankland's 1839

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[124] William Charles Wentworth, *A Statistical, Historical, and Political Description of the Colony of New South Wales: And Its Dependent Settlements in Van Diemen's Land* (G. & W. B. Whittaker, 1820).

[125] Breton, *Excursions in NSW, WA and VDL*, 1834.

[126] Matthew Flinders, *Historic Plan 12: Chart of Terra Australis*, 99 1798, 99 1798, AF395/1/10, TAHO, https://stors.tas.gov.au/AF395-1-10.

[127] A reconstruction of the Derwent River chart is available online, see appendix five. G.W. Evans, *Map of the Settlements at Port Dalrymple, Van Diemens Land*, 1819, 1819, NLA, http://nla.gov.au/nla.obj-231304508; G.W. Evans, *Map of the Settlements on and near the Derwent River Van Diemens Land*, 1819, 1819, NLA, http://nla.gov.au/nla.obj-231304693; G.W. Evans, *Historic Plan 2: General Map of Tasmania Compiled from Various Maps and Surveys by GH Evans, Deputy Surveyor General* (London, 1821), AF395/1/3, TAHO, http://stors.tas.gov.au/AF395-1-3.

chart of the island is also referred to in this study.[128] All of these charts have strengths and weaknesses, and the circumstances of their creation are discussed in Chapter Three. Some contain many place names and more precise boundaries, while others list the landholders in each district but do not label landmarks. Sidney Hall's 1828 chart of the island contains an oversized Macquarie Harbour, an error collected in the process of compiling data from other cartographers, but the settled districts are reasonably accurate, having probably been taken from Scott's 1824 chart.[129]

Figure 10: Van Diemen's Land, 1824 (Scott).

Soils

When settlers arrived at the site of a new colony, they often expressed similar concerns. A reliable supply of water was crucial, as were routes for transport, irrigation, exploration, and expansion. Both of these requirements were often fulfilled by establishing the settlement on riverine land. The other pressing priority was to become self-sufficient, able to grow crops so the inhabitants would not be reliant on supplies from other colonies or Britain. The Australian colonies were established as British farming methods were under scrutiny and techniques were undergoing rapid change. Although there had been some understanding of chemicals within the soil and their necessity in growing crops, the eighteenth century saw

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128 Thomas Scott, *Chart of Van Diemen's Land* (Hobart: J. Walsh & Sons, 1824), https://stors.tas.gov.au/AUTAS139593842j2k; Thomas Scott, *Military Chart of Van Diemen's Land Shewing All the Roads Houses and Stations: Made by Order of His Excellency Colonel Arthur, Lieut. Governor of the Island and Its Dependencies Nov.r 1826*, 1826, 1826, Z/MC 880/1826/1, State Library of NSW, http://archival-classic.sl.nsw.gov.au/album/albumView.aspx?itemID=1261149&acmsid=0; George Frankland, *Field Plan of Movements of the Military. No. 9, Military Operations against the Aboriginal Inhabitants of Van Diemen's Land*, 1831, 1831, TAHO, https://stors.tas.gov.au/AUTAS001139593537; George Frankland, *Map of Van Diemen's Land* (London: J. Cross, 1839), https://stors.tas.gov.au/AUTAS001139593859.

129 Sidney Hall, *Van Diemen's Land*, 1828, 1828, NLA, http://nla.gov.au/nla.obj-230728566.

an increased interest in optimising output from agricultural land. Although the surveyors and early settlers were not necessarily landowners or farmers with an intimate knowledge of the agricultural sciences, they brought with them some basic understanding of crop cultivation. The lands they chose were, therefore, determined partly by water supplies and by the soils. The water supply was primarily overground, with no mention of underground flows and springs. This in turn influenced the soils chosen, as soil types are closely linked to elevation and water flow. Nonetheless, distinctions between those lands alienated early and later are evident.

The key factors considered in this study are the surface texture and permeability of the soils. Both of these elements can be crudely ascertained by look and feel. The surface texture is constructed of three elements – sand, loam and clay – which are combined to form soil textures such as 'sandy loam', 'clay loam', or 'light clay'. Sand is highly acidic, and nutrients are washed out very quickly, as it has a very high permeability. Pure sand is, therefore, only suited to plants that have adapted to it. Clay has low water permeability, and is prone to waterlogging. The tight structure is difficult for nutrients to move in, and also for plant roots to penetrate. Loam sits in the middle of the range, a mixture of sand, silt and clay, and is generally the ideal soil. It has the highest possibility of water infiltration, nutrient and water retention. It provides an environment plant roots can penetrate, and in its best form is resistant to both waterlogging and drought.[130] The combination of these three elements creates a wide variety of soils suited to different uses, and for centuries farmers have tweaked their composition through methods such as using lime to counteract the acidity of sandy soils, manure to increase fertility, or specific crops to reintroduce nitrogen.[131]

Two datasets have been used in this study to contribute to understandings about the prevalent soil types in the settled districts. The first is the Australian Soil Classifications (ASC), which is available as a digital ArcGIS layer.[132] Under the ASC, the general and

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130 Katharine Brown, 'Soil Texture – Measuring in the Field', Soil Quality, accessed 19 April 2017, http://soilquality.org.au/factsheets/soil-texture; Tasmanian Planning Commission, 'Soil Indicators and Distribution: State of the Environment Tasmania 2009' (Hobart: Tasmanian Planning Commission, 1 March 2010), http://soer.justice.tas.gov.au/2009/indicator/124/index.php.

131 Robert A. Dodgshon, 'Land Improvement in Scottish Farming: Marl and Lime in Roxburghshire and Berwickshire in the Eighteenth Century', *The Agricultural History Review* 26, no. 1 (1978): 1–2.

132 David Jacquier and CSIRO Land and Water, 'Interactive Key to the Australian Soil Classification', accessed 18 January 2017, http://www.clw.csiro.au/aclep/asc_re_on_line_V2/soiusing.htm.

specific qualities of all soils in Australia have been categorised. The broadest of these is the Soil Order, of which Australia has thirteen, including Kurosol, Chromosol and Sodosol. These names commonly (although not always) derive from particular elements in or the appearance of the soil. For example, Ferrosols have a high iron content, and Chromsols often have vibrant colouration. The next level is Suborder, which is based on colour, resulting in soils such as Brown Kurosol or Yellow Sodosol.[133] There are further delineations, right down to the specific location, but these specifics are discussed within their context.

Each specific soil in Tasmania has been categorised under the Land Systems of Tasmania (LST), and has a code and a name, such as the Brown Kurosol in Risdon Cove which is coded as 264141 – Government Hills.[134] These identifiers can be very specific, but each digit in the code represents a factor that influenced the identification of that soil. The full definitions of these categories are found at appendix eight:

> First digit: Annual rainfall within seven brackets, with 1 being the lowest, and 7 the highest
> Second: Geological period of the dominant rock (Precambrian, Jurassic etc)
> Third: Rock type (within igneous, sedimentary or metamorphic categorisation)
> Fourth: Altitude within five brackets, from lowest to highest.
> Fifth: Topography (flat, mountain, coastal etc)
> Sixth: Separates soils that have the same code but have differences and require their own code.[135]

The LST is not available as a digital layer, and the data was extracted manually. The soils of the four key areas used in this study were identified on a physical map and entered into a spreadsheet. Unfortunately, this means it has not been possible to calculate detailed statistics about grant sizes and soil types, although it is possible to align broad soil categories and settlement patterns.

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133 Jacquier and CSIRO Land and Water.
134 Jacquier and CSIRO Land and Water; G.J. Pinkard, *Land Systems of Tasmania: Region 4* (Hobart: Tasmanian Department of Agriculture, 1980), 82–83.
135 J.B. Davies, *Land Systems of Tasmania: Region 6* (Hobart: Tasmanian Department of Agriculture, 1988), 7–9.

Soil types can reveal significant information about how individuals have approached a particular acreage. Grantees were aware of the basics of soils, and the place that they chose to locate can reveal much about their intentions or planned uses. Not only that, soils can hint at previous uses, as they adapt to changing conditions around them. This is, however, a weakness in using soils for historical analysis, especially modern-day soils. They respond to usage, as nutrients and minerals are depleted or increased, or when flood, fire, or erosion sweep through the area. It is therefore important not to assume the soils of today are the soils of the nineteenth-century. This research accounts for this by using soils as only one source among many, building a composite image of land use from distinct sources.

VEGETATION – PRE-EUROPEAN SETTLEMENT (1788)

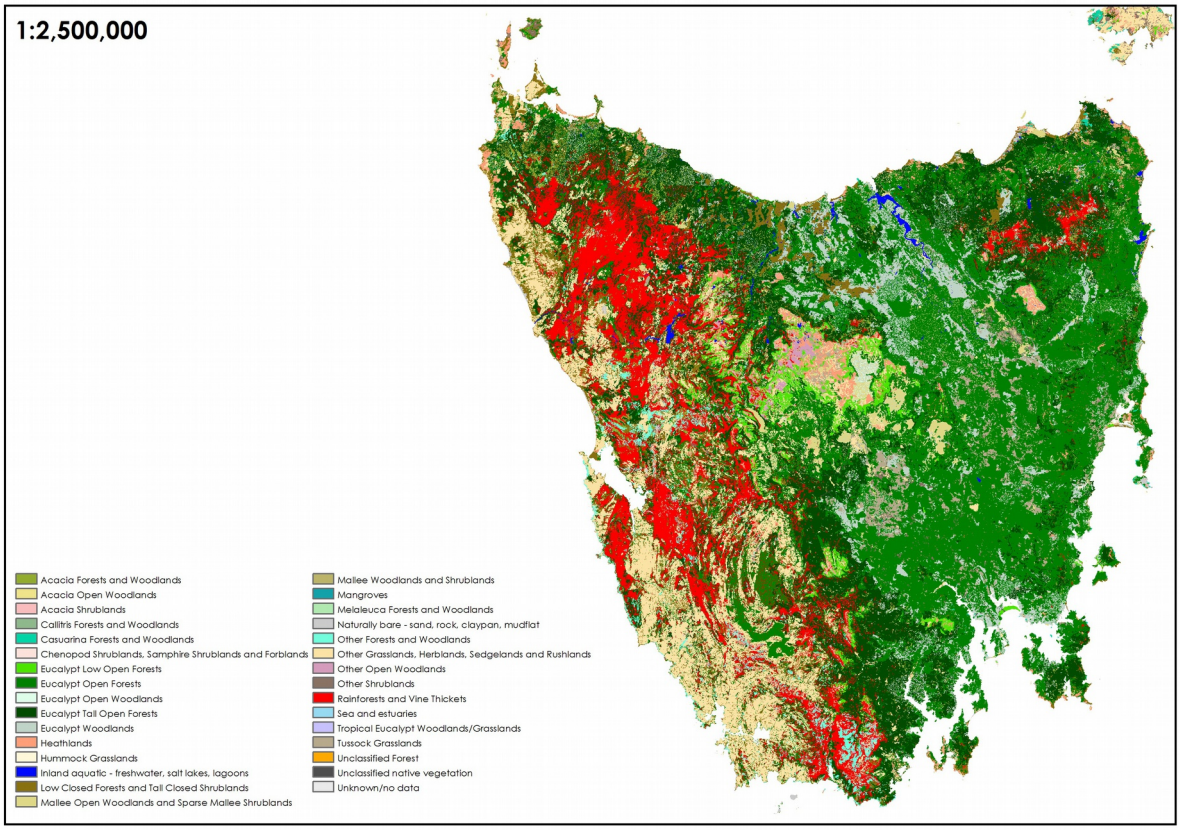

Figure 11: Pre-European Settlement vegetation – Tasmania (GA).

A chart purporting to show a 'reconstruction of natural vegetation of Australia as it probably would have been in the 1780s', has been published by Geoscience Australia (GA), based on data provided by the relevant department of each state.[136] In Tasmania this

[136] Geoscience Australia, *Vegetation – Pre-European Settlement (1788)*, n.d., n.d., http://www.environment.gov.au/fed/catalog/search/resource/details.page?uuid=%7B3B0B4F84-AA9E-40FB-B5C1-0DB9019CB1A1%7D.

was the Department of Primary Industries, Parks, Water and the Environment, the same department that created and maintains LISTmap, and it shows very similar data to that found in the LST. This chart is useful for indicating the vegetation the Europeans saw when they arrived on the island, and identifying the relationship between settlement patterns and Aboriginal land use. When the surveyor Charles Grimes described his 1807 exploration through Epping Forest, this chart supports his description of it being bounded by plains.[137]

Figure 12: Pre-European vegetation (GA) in New Norfolk with 1804 descriptions of the land super-imposed.

This thesis has used version 4.2, previous versions having been updated and adjusted to reflect the inclusion of additional data. At best, this chart should only be taken as broadly indicative of pre-European vegetation. It contains a high level of unknown or hypothesised information – 'blank' areas in Tasmania have been filled in with current native vegetation, two-hundred years after the cessation of Aboriginal land management. It also shows only the dominant vegetation. As the description states: 'an area may be mapped as dominated by eucalypt open forest with a shrubby understorey, although it contains pockets of rainforest, shrubland and grassland vegetation as subdominants.'

[137] Charles Grimes, *Exploration Chart 29: Launceston to Ross*, 1807, 1807, AF395/1/42, TAHO, https://stors.tas.gov.au/AF395-1-42.

The mixed quality can be seen at figure 12, which shows the descriptions of the land from the first European chart of the area, *Monmouth 0*, over the vegetation chart around New Norfolk. Some descriptions match, but generally the chart shows the whole area as Open Eucalypt Forest, while *Monmouth 0* indicates that there were areas bare of trees. This demonstrates the broad accuracy of the vegetation chart, but also the fine detail it is missing.[138]

How these sources were combined

Although the LDC and AF396 contained the name of the landholder, the official acreage held, and how the land had been obtained, this gave only a small part of the picture of land possession and transformation in Van Diemen's Land. Therefore, the attribute table was supplemented with information from the other sources described here. Each source was manually cross-referenced against the charted information – the name and acreage of each polygon compared first to every line of the land grant and conveyance records, and then the musters. It was necessary to be flexible in interpretation – if the name, acreage and district almost matched, but were a few acres different (depending on the size of the grant this could be ten or one hundred), or the first names did not match, they were considered a match (with a note made in the comments). If the name was too common – J. Brown for example – this was also noted, but a match not made.

These details were then correlated with and again embellished with more detail, this time from the written accounts. The *Land Commissioners' Journals* and emigrants' guides often took the reader through an area, property by property, and thus identified landholders and their neighbours. If a precise year of granting or sale had not been found, these guides narrowed the year down by showing they were in the area before the year of publication. The most imprecise sources were the maps of Van Diemen's Land which showed the names of major landholders. These were useful for showing that a person was in an area, but not which property was theirs. Sometimes this could be refined by reference to the *Australian Dictionary of Biography,* or letters contained within the *HRA* which described a person's first grant, including the size, boundaries and/or name of the property. The resulting table includes two columns of sale data, recording the first grant/sale and any

[138] Meehan, 'Monmouth 0'.

subsequent conveyance, as well as the names of those involved in these transactions. The data source is also recorded, as well as the reasoning behind any informed guesses.[139]

Statistics

Once the data was collected, it could be manipulated to display a number of different variables – years of grants and sales, landowners with multiple plots scattered across the region, relationships between acreage and year, to name a few. The difference between the 'official' and the 'actual' acreage could also be analysed, revealing discrepancies between the two as under- and over-measurements. Land grant charts are a reflection of the work of surveyors in the field, and the stresses on each individual and the Survey Office might be expected to have an impact on the quality of that work. The argument then follows that the years leading up to the Black War might be characterised by spikes of inaccuracy corresponding to the dangers of accessing and surveying the 'frontier'. Using Nicholas Clements' list of attacks on Europeans, it is possible to identify the sites of at least 150 incidents around the Clyde River settlement (Bothwell), with even more in that region that could not be located on the map, for example.[140]

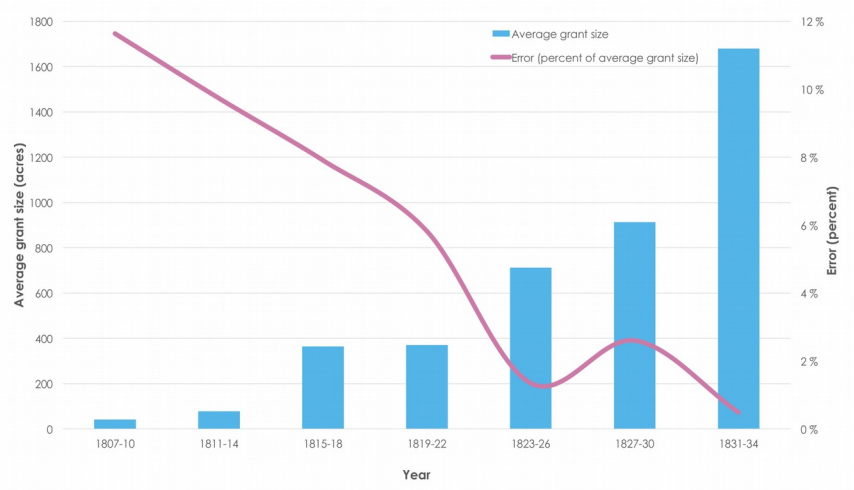

Figure 13: Accuracy per grant and average grant size.

To measure trends of inaccuracy, properties with illegible acreages, 'portion of' records, those that were undated or outside the date range, or otherwise had blank data, were excluded from the dataset and the difference between the 'official' and 'actual' acreage of those remaining (406 grants) was calculated. Figure 13 shows an increasing trend of accuracy overall on the LDC, which isn't surprising in light of the improving work conditions discussed in the following chapter. Overall, there is a drop from 11 percent inaccuracy per acre granted, to only 3 percent. Without dates of survey,

139 See appendix two for a demonstrative version of this database.
140 Lists kindly provided by Nicholas Clements, 'Email: Casualty Lists', 11 November 2015.

however, it cannot be known how disconnected the errors are from the original measuring exercise – whether they were introduced at a later stage of updating or redrafting. What they show is not a reflection on the work of the surveyor so much as a revelation of the excess or deficiency in a landholder's acreage. By breaking the data down into those properties that are more than 5 percent oversize (larger on the map than they were recorded) and 5 percent undersize, it is possible to analyse changes in under-and over-measurement over time. In the late 1820s there was a significant trend towards undersized properties, where previously the reverse had been the case. These patterns are discussed in greater detail in Chapter Seven.

Settlement Patterns

Using the data collected it became possible to identify and define the main settlement patterns visible in the landscape. This was achieved through manual observation. The starting points were two sets of regulations that created very distinct looking properties. It was assumed that the majority of properties would adhere to at least the size, if not shape and location, of the government rules governing land granting. Throughout the process the main tools used were the eyes, ruler, and area calculations to identify those that did not immediately fall within a pattern. Only those properties that had dates were initially categorised, with New Norfolk used to develop the broad guidelines that were then refined by testing them against other areas.

Each polygon was examined against a set of criteria, and categorised accordingly. The first pass identified acreages that fit within the long-lot regulations sent out with the early colonists (discussed in Chapter Four) – long, river-edge, and smaller than about 100 acres. The next form identified was that of the properties that were influenced by the regulations of the 1820s (discussed in Chapter Five) – over 320 acres, and more square than the long-lots. Properties that fit the shape profile of the long-lot, but were larger than usually available to an emancipist, were categorised third.

The next stage was to go back through all the properties that had not been defined, to reassess them against the descriptions. This was also the step at which the definitions were tweaked to encompass the properties they described, and then the forms named. The main adjustments related to the size parameters, and the realisation that large grants often had

irregular shapes. The majority of remaining acreages could fit within one of the categories without compromising the initial regulation-based definitions. Those few properties that could not fit within the three categories were labelled within a miscellaneous category. The patterns were compared against a timeline of known European expansion, and each aligned with particular events or factors in the colony.

To break them down further would have defeated the main purpose of categorising the early land grants, which was to create markers that indicated some underlying distinction between one property and another, thereby highlighting a question for closer examination. The boundaries between these European patterns can be blurred, as individual settlements transitioned from one to the other, their landholders taking in extra acres for expanding agricultural businesses. Nevertheless there are several defining characteristics that render each pattern visibly distinct.

Three categories of pre-1830 settlement patterns have left their mark on Tasmania. All three show clear purpose, and can be read and interpreted like an archival document. One dominated pre-colonial Holocene Tasmania, while the other two developed in the wake of the European arrival. The pre-European pattern, mosaic farming, was a product of Aboriginal fire-stick farming. This pattern has long been recognised, and its formation and history are discussed in Chapter Six. The remaining two categories have been defined as part of this research, as emancipist and free settler grants have been systematically compared for the first time. Each category is defined by shape and location, but covers several patterns that are distinct, generally because of size and the background of the landholder.

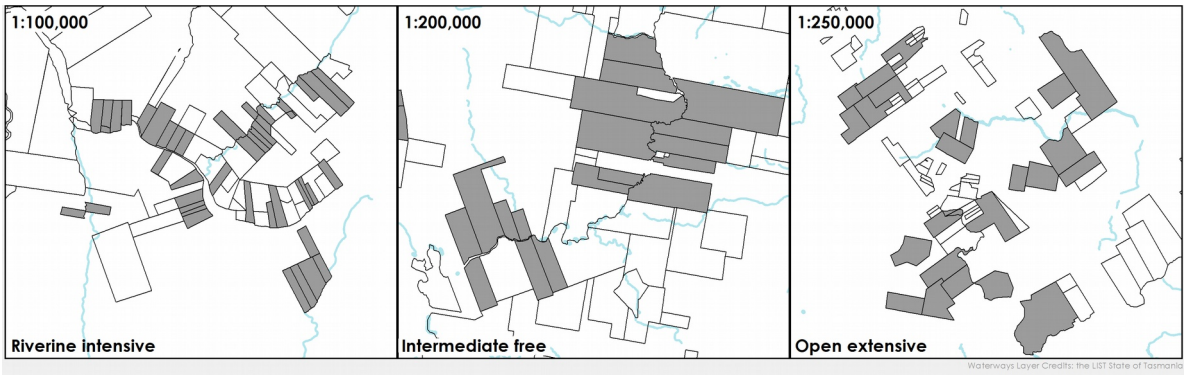

Figure 14: The main settlement patterns discussed.

The first category is the river-based long-lot plot, and the term developed in this thesis to describe the primary pattern observed within this category is 'riverine intensive'. British colonies had been laying out land grants following a similar pattern throughout the previous century, but this type of land settlement had its origins in Europe. This transitioned to a larger long-lot pattern, the intermediate free. The second category is an inland form, and I use the term 'open extensive' to describe the more dominant pattern in this category. This form is directly associated with expanding settlement by wealthy landowners and isalmost always preceded by a riverine intensive pattern.

Long-Lot Forms

Riverine intensive: These plots were usually the first set out in a new settlement. Following early guidelines, they were characteristically long and skinny (usually conforming to a 1:3 or 1:4 ratio), tightly packed, and always had their shortest end on the river edge. Starting at thirty acres, and incrementally increased to one hundred acres according to family size and the status of the settler, these represent the starting point for many settlements.

Intermediate free: The plots are a larger (over one hundred acres) version of the riverine intensive, tied to the river edges and stretching inland. They have a 1:3 ratio, suggesting the earliest guidelines still had practical purpose after the introduction of much larger grants.

Inland Form

Open extensive: These plots were usually granted to wealthy landowners after the initial opening of the land. Similar to the patchwork, these plots are irregular in appearance, both in shape and location, and were at first often surrounded by the Crown land from which they were alienated. Usually more than 320 acres (the minimum grant size from the early 1820s), they represent the governmental push to encourage free settlers to emigrate out to Van Diemen's Land.

Miscellaneous Forms

Many land grants have been amalgamated and subdivided over the years, forming boundaries that are not riverine intensive, intermediate free, or open extensive. They have been formed through so many different processes they are not discussed independently within this research, but their presence is noted.

Patchwork: Between thirty and five hundred acres, these plots are irregularly shaped or polygons of approximately 1:1 or 1:2 ratio, and are not tied to the river edges. Some of these plots are long from the river edge, with a dogleg furthest from the river, suggesting they are an amalgamation of two blocks. Although they have size crossover with Open Extensive, they are usually distinguished by being significantly smaller than the plots around them.

Uncategorised: These plots do not fit into any other category. They are usually too small or have unclear boundaries due to later alterations or manuscript damage. Some of these plots have clearly been subdivided at an unknown date, but the small number of these does not justify the complication of defining them according to their initial shape.

These categories are intended to be quite broad, with loose definitions. In the course of this research many properties have been assessed and categorised, following the visual indicators outlined both here and in the following chapters. This has been a semi-subjective exercise, as many acreages had unique qualities that meant they did not fit entirely within the categories. Usually it was clear which category they were closest to – they may have been a little wider or had an unusual shape, but overall matched one of the main pattern types. There was also an issue of changing colonial values, particularly when considering the open-extensive pattern. Although the minimum size for this was set at 320 acres, based on the regulations of the 1820s, this would have been an enormous grant only ten years earlier.[141] Attempting to capture such changes within the pattern definitions complicated matters too much, and instead they are reflected in the different stages these settlements moved through as they expanded across the landscape.

Those plots that have been categorised as patchwork or subdivided make up a small proportion (five percent, see figure 15), of the acreages analysed. They cover landholdings that are ambiguous, could be a skewed version of several of the patterns, and also those that are dissimilar from all other blocks. Most of the patchwork pieces are scraps of land that have been taken up at some point between the initial establishment of a settlement and the mid-twentieth century, when updating of the LDC ended. Some are probably the result

[141] For example, the property of 300 acres granted in 1814 to Thomas White at Norfolk Plains would have been a vast empire at the time, but a meagre holding by 1824. G.W. Evans, "Cornwall and Westmorland 1: South Esk River, Lake River, Norfolk Plains, Port Dalrymple, Surveyor Evans, Signed by Governor Macquarie," 1814, AF 396/1/1325, TAHO, https://stors.tas.gov.au/AF396-1-1325.

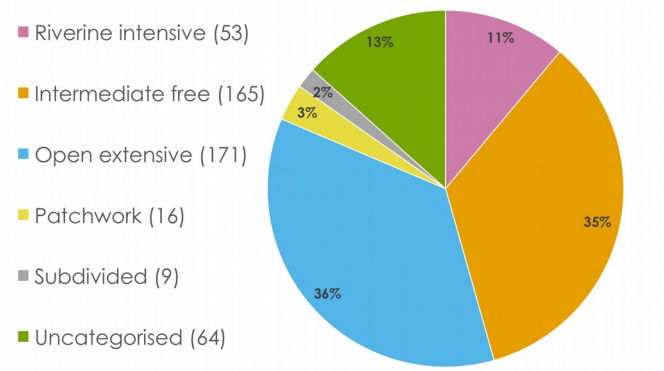

Figure 15: Breakdown of grant types (count in brackets).

of land acquisition – a long-lot cut off from the river at a later date, for example.

Subdivided plots are properties that have been divided at some point and listed under separate names. As will be seen, the land market was highly active, with sales and trades flaunting regulations throughout the colonial period. The settlers had a great enthusiasm to expand their territories, buying up land that would suit a wide range of uses. Subdivided plots tell the other half of this story – these are the acreages the settlers broke up to sell or lease out. Future research into the relationship between expanding and diminishing lands (and the associated land holders) would reveal new understandings about hierarchies and social mobility.

Chapter Three:
Surveyors

On the 12th of October in 1832, several teams of surveyors were working their way across the island of Van Diemen's Land, measuring and marking out new grants, remeasuring old ones, and settling disputes about boundaries. Scattered showers fell on some of the teams, and from the central districts around Oatlands, Charles Wedge sent some of his assigned convicts back to Hobart for clothing as they had no shoes. Bare feet were common among the government men, although not for want of complaints by their supervising surveyors. It would be a week before Charles Wedge saw his government men again, although much to his disgust only one of the three returned, after one received a ticket of leave and Abrahams was mysteriously neither returned nor replaced.

Not only could assigned convicts be reassigned or given their ticket of leave without warning, several surveyors also complain about losing them to common vices, particularly alcohol. One of John Helder Wedge's men, William Simmonds, was dismissed and sent to a chain gang for drunkenness. The opportunistic assignee James Sharman was sent to collect a repaired theodolite stand, and absconded, leaving surveyor Dixon without the important instrument.[142]

[142] 'Assistant Surveyors' Weekly Returns of Work Performed, With Quarterly Summaries' 1832, LSD 222/1, TAHO.

Introduction

On Saturday the eleventh of November, 1826, a small public notice in the *Hobart Town Gazette* advised that 'The Survey Office has been removed from Argyle-street to Davey Street.'[143] This would have been of great importance to land-holders, both current and prospective, as they attempted to push through the red tape to get ownership formally recognised. This move signalled the beginning of a new era for the Survey Office, and was accompanied by a significant increase in staffing and resources. The locations of earlier offices have not been identified. An 1825 almanac located them in Murray St, while the afore-mentioned public notice listed Argyle St.[144] These streets run parallel through the city and it is likely that either the offices moved from the rooms of G.W. Evans to those of E. Dumaresq when he stepped in as Assistant Surveyor General, or that one source is in error. To confuse matters further, an 1821 classified lists someone as living 'nearly opposite' G.W. Evans in Bathurst St.[145] No map has been found that shows either a surveyor residence or office in any of these streets. The difficulty of locating the earlier offices highlights the transformation of surveying practices from the British arrival in 1803 to the re-organisation under Lieutenant-Governor Arthur.

This chapter examines the nature and purpose of colonial surveying, including the imperial nature of the operation and allegations of corruption. There is little doubt that the regulations around land grants were at times bent and ignored, but from the dispassionate distance of time, it is easier to see how the allocation of land grants was affected by a range of circumstances beyond simply corruption. This chapter uses GIS to assess the surveyors' work, but contextualises this within the broader story of the development of Van Diemen's Land as a colony.

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143 'Advertising', *Hobart Town Gazette*, 11 November 1826.

144 The Almanac lists these offices as Murray, while the paper says Argyle. These streets run parallel through the city and it is likely that either the offices moved from the rooms of G.W. Evans to those of E. Dumaresq when he stepped in as Assistant Surveyor General, or that one source is in error. No map has been found that shows the offices in either of these streets. Andrew Bent, *The Tasmanian Almanack for the Year of Our Lord 1825* (Hobart Town, 1825), 76, https://stors.tas.gov.au/AUTAS001139627822.

145 *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 12 May 1821, http://nla.gov.au/nla.news-article1089446.

General purposes of surveying

The more accurate the map, the more it resembles the territory. The most accurate map possible would be the territory, and thus would be perfectly accurate and perfectly useless.

Neil Gaiman, *American Gods*[146]

The map is not the territory…

Alfred Korzybski, *Science and Sanity*[147]

Every map is a carefully curated work. Every mark and line has been chosen to convert a living landscape into a two dimensional illustration. Each map has a particular purpose, it is filled with intention, whether stated or not, and communicated through a combination of text and symbols. A cartographer chooses what should be noticed by the map-user. Through omission, the cartographer also hides features from the casual browser. This 'silence on maps' is seen in the omission of native Irish cabins on seventeenth century English maps of Ireland, the lack of detail in poor districts of early town maps, or the absence of any Aboriginal sites on early Van Diemonian charts.[148] A map also codified the unknown, the route of a roughly surveyed river would have the same credibility as one meticulously measured and recorded.

Although all maps tell a story, not all are made of paper and ink. The vast majority will never be seen; they are personal imagined maps of life's adventures. Nor are they confined to visual cues – a smell or sound can transport one to the vast continent of Memory. Directions are given to newcomers according to long-gone landmarks – 'turn left at the old post office', and the layout of a playground may be remembered according to misadventure and childhood injuries. For Aboriginal Australians, maps are not static, they develop and change, passed from generation to generation. In central Australia, maps of Aboriginal territory can be represented by dot paintings transposed from traditional sand paintings in the earth. Based on what Denis Byrne calls 'geo-biography', these maps place orientation

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146 Neil Gaiman, *American Gods* (Harper Perennial, 2003), 545.

147 A. Korzybski, *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics*, International Non-Aristotelian Library (International Non-Aristotelian Library Publishing Company, 1958), 58.

148 J.B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, ed. Paul Laxton (John Hopkins University Press, 2002), 67.

within story and embrace the connection between event and location.[149] This connectedness to the land was not important to the British – to acknowledge Aboriginal geo-biography would have been to acknowledge their claim over the land, and did not assist in laying a pre-formed grid over the territory.[150]

Western maps are made up of grids, each square representing a defined space that contains particular items considered important.[151] The grid is a powerful way to organise an area, to catalogue its specifics. Each element in each grid square is labelled, to 'simplify the world somewhat…give the sense of starting over, clarify for those overstimulated by the ordinary confusion.'[152] While colonists may have thought they were surveying and exploring an empty land, it is more accurate to envision their blank parchment as a snowfall entirely covering existing features. There was nothing blank or virgin about the land they were attempting to organise. The grid gave the unknown an exactness that allowed it to be attached to laws and practices, while the physical traces of pegs and boundary lines visually indicated that the British 'possessed' the land.[153]

For colonial settlers the map provided a platform that casually hid the unwelcome elements of indigenous populations, while emphasising the abundance of cultivatable land and possibilities of prosperity.[154] A divine hand was attributed to the creation of these lands for the British. Explorer and surveyor John Oxley gushed over the Tasmanian Midlands – 'Never did the Sun in his large Round shine upon a finer Country', giving credibility to the British perceived right of appropriation.[155] Daniel Clayton, while discussing imperial practices in the Pacific North-West, argued that the British used cartography to create an 'uncultivated wild' and thereby fade the Native people out of sight and mind.[156] In the earliest detailed maps, the wild, wooded nature of Van Diemen's Land was emphasised. In a 1777 map of Adventure Bay (Bruny Island) lagoons and woodland are shown, but there is no indication of any inhabitants.[157] James Cook's 1785 depiction of the south coast of

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149 Denis Byrne and Maria Nugent, *Mapping Attachment: A Spatial Approach to Aboriginal Post-Contact Heritage* (Hurstville: Dept. of Environment and Conservation, 2004), 137–88.

150 Weaver, *The Great Land Rush*, 43.

151 Paul Carter, *The Road to Botany Bay: An Essay in Spatial History* (London: Faber, 1987), 204–5.

152 R. Harbison, *Eccentric Spaces* (MIT Press, 1977), 127.

153 Byrnes, *Boundary Markers: Land Surveying and the Colonisation of New Zealand*, 95.

154 Harley, *The New Nature of Maps*, 67–69.

155 Report on settlement, 1810, HRA III (i), 761.

156 'The Creation of Imperial Space in the Pacific Northwest', *Journal of Historical Geography* 26, no. 3 (2000): p.342.

157 T Bowen and Alexander Hogg, *Plan of Adventure Bay on Van Diemens Land Lat 43°21.20.S Long. 147°25E Var 5°15'E 1777* (London: Alex. Hogg, 1778), http://nla.gov.au/nla.obj-230740979.

Van Diemen's Land displayed its wild nature, with mountain ranges lining the coasts, but again any signs of life were omitted.[158] Just as the British did not map the '"Real" India', the Van Diemen's Land captured through these maps was constructed to suit British purposes and understandings.[159]

Maps such as these accompanied ship's logs and captain's reports, which would often contain more detail. The information they contained was often related to sailing, and therefore important for other ships exploring the area – water depths, sources of timber and the location of fresh water. Freycinet's 1802 map of the Rivière du Nord (Derwent River) shows fathoms and kelp beds, but only shadows hint at the existence of land.[160] But maps also 'make the landscape fit indoors, make us masters of sights we can't see and spaces we can't cover.'[161] In the eighteenth and nineteenth centuries, they were also engraved for a wider audience, with distribution in pamphlets and books celebrating the adventure of Elsewhere.[162] These rugged coastlines and mysterious interiors gave their audiences the vicarious thrill of the unknown. Although Britain itself was in the midst of a process of deforestation, the 'wilderness' held a certain appeal, but only at a distance.[163] The colonial observers also gained satisfaction from bringing order out of the chaos.[164] By introducing Van Diemen's Land as an untamed and uninhabited country, the explorers were allowing their audience to experience the distant exploits, while removing the danger of the unknown savage. They also set the stage for future celebration when maps and images would display the subjugation and transformation of the land into British order.

There was no expectation of accuracy in these published maps – they assisted the imagination, rather than the body, to travel through unfamiliar lands. As Harley stated:

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158 William Bligh and James Cook, *Chart of Van Diemen's Land*, Voyage to the Pacific Ocean, Undertaken by the Command of His Majesty, for Making Discoveries in the Northern Hemisphere. (London: G. Nicol and T. Cadell, 1785), http://www.davidrumsey.com/luna/servlet/s/92d8p6.

159 Matthew H Edney, *Mapping an Empire: The Geographical Construction of British India, 1765–1843* (Chicago: University of Chicago Press, 1997), 2.

160 Louis Claude Desaulses de Freycinet, *Voyage de Découvertes Du Capitaine de Vaisseau Mr. Baudin: Cours D'une Partie de La Rivière Du Nord Terre de Diemen*, 1802, 1802, http://nla.gov.au/nla.obj-232338111.

161 Harbison, *Eccentric Spaces*, xii.

162 This is seen in the publication of Cook's 1785 map in a book commemorating the three journeys of Cook: Bligh and Cook, 'Bligh and Cook, VDL, 1785'.

163 Tom Williamson, *The Transformation of Rural England: Farming and the Landscape, 1700–1870* (Exeter: University of Exeter Press, 2002), 44–48; Reynolds, *A History of Tasmania*, 39–40.

164 Reynolds, *A History of Tasmania*, 39–40.

> The power of the surveyor and the map maker was not generally exercised over individuals but over the knowledge of the world made available to people in general.[165]

The physical map was of little use in demonstrating to Indigenous peoples that the land had been 'settled' – a western-style map may not even have been comprehensible to some Indigenous peoples. But it gave those remote onlookers a sense of authority over the land, a use that did not require high levels of accuracy. John Lothian's 1848 *People's Atlas* for example, taken from the 'Best Authorities' uses a map of Van Diemen's Land that blends information from different sources and years – the short-lived separate settlements of Cornwall and Buckingham, the 1820s Van Diemen's Land Company grants in the north-west, and a lone land quality descriptor ('Good Land') in an area long since fully allocated.[166] Where Lothian took his information from is unknown, but it certainly was not from the most recent authorities. In capturing the landscape on paper, the cartographer detaches it from its living, transforming nature, a process described by Nicola Whyte as becoming separated or divorced from the oral traditions and living memories of the land.[167] As Lothian's map of Van Diemen's Land demonstrates, in the nineteenth century a map would be updated according to the whims and resources of the engraver.

Colonial cartography was not only intended to bring foreign land to the breakfast tables of London, it also operated as a mechanism to impose colonial control over the area surveyed. At the most basic level, surveying a land captured it on paper, and helped the governing bodies visualise the area they laid claim to.[168] Matthew Edney notes the co-dependent relationship between empire and maps – maps give the empire 'territorial integrity'. The empire is a creation of mapping, existing only because its limits can be mapped.[169] From the earliest days of the settlement of Van Diemen's Land, maps were sent to the Colonial Office in Britain, with the purpose of understanding the distant land it now controlled. Surveyor-General George Frankland told the colonial secretary Lane that there was a large map of all the island hanging in the Survey Office, as well as vast quantities of more detailed maps and documents recording land grants. According to the longest-serving

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165 Harley, *The New Nature of Maps*, 112.

166 John Lothian, *Australia with the British Settlements. (Insets) Swan River. New South Wales. Van Diemans Land* (Glasgow: James MacLeod and Francis Orr & Sons, 1848), http://www.davidrumsey.com/luna/servlet/s/3050tb.

167 Nicola Whyte, 'Senses of Place, Senses of Time: Landscape History from a British Perspective', *Landscape Research* 40, no. 8 (2015): 4.

168 Harley, *The New Nature of Maps*, 134–46.

169 Edney, *Mapping an Empire*, 2.

surveyors these had been available since at least 1821, if not longer, and were in a state of continuous updating.[170]

A key term in discussing the ability of a distant body to rule a territory is 'organisation' – by mapping out an area, by breaking it into component parts, the random structure is controlled and becomes another unit in the Empire.[171] Rather than treating each charted part as unique, the Colonial Office could then transfer rules and principles from one colony to another. This is seen in the rules about land grants, discussed in Chapter Four, which were applied to colonies in New England and New South Wales, with only the slightest adjustment in wording. Mapping was crucial in the Empire's struggle to bring new lands under its control.

Stage One: 1803 to 1812

'Other maps are such shapes, with their islands and capes!
But we've got our brave Captain to thank'
(So the crew would protest) 'that he's bought us the best—
A perfect and absolute blank!'
The Hunting of the Snark, Lewis Carroll[172]

One of the first tasks of a new colony is to establish a good site for initial camp, with a hope that it will be satisfactory for ongoing use and development. In Van Diemen's Land, Risdon Cove on the Derwent River was chosen after Lieutenant John Bowen found 'many fine Spots on the borders of the River', but settled on the one with a 'much better Stream of fresh water' and 'very extensive Valleys laying at the back of it.' His first task was to set up camp, but within a month convict-turned-assistant surveyor James Meehan was sent out to survey the land on either side of the River Derwent.[173] Although parts of Van Diemen's Land had been mapped by prior Europeans, including Abel Tasman, James Cook and Louis de Freycinet, their maps usually focussed on coastlines, or the areas immediately inland.[174] For the British, the island was nothing more than an outline with a largely blank

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170 11 July 1833, George Frankland, 'Surveyor General's Letterbooks of Letters to the Colonial Secretary' 1833, 445–46, LSD 61/1, TAHO.

171 For discussion on the partitioning of the land, see Chapter Two of Byrnes, *Boundary Markers: Land Surveying and the Colonisation of New Zealand*.

172 L. Carroll, *The Hunting of the Snark: An Agony, in Eight Fits* (Macmillan, 1876), 16.

173 Bowen to King, 20 September 1803, HRA III (i), 197–98; Meehan, 'Monmouth 0'.

174 For example see: Bligh and Cook, 'Bligh and Cook, VDL, 1785'; Bowen and Hogg, 'Adventure Bay, 1777'; Freycinet, 'Riviere Du Nord Terre de Diemen'.

centre. As John C. Weaver noted, the colonial surveyor did more than measure, mark and describe land. A good surveyor assessed the land's potential, and

> good surveyors on all frontiers enjoyed reputations for skill in assessing the ease of clearing land, the value of timber, the availability of water, and the strategic importance of particular locations.[175]

As this chapter demonstrates, the ability of the Van Diemonian surveyors was regularly (and sometimes rightfully) questioned, but the Colonial Office recognised their importance. The viability of the colony relied on good agricultural land. Governor King sent Meehan to the colony, stating he had 'no more Settlers yet till I know more about the Country.'[176] Meehan's task was to 'inform himself fully of the nature of the Country in the Circuit of 10 or 12 miles', and the result (*Monmouth 0*, figure 16) was a map of the Derwent River from the northern point of Bruny Island to the area now known as Hamilton.[177]

Figure 16: Derwent River 1804 (Meehan, Monmouth 0).

As he moved out from the Risdon Cove camp, Meehan adopted the role of 'cultural mediator', as Giselle Byrnes has described the earliest colonial surveyors. His role as the 'advance guard', pushing British interests into the hinterlands, brought him into contact with the Tasmanian Aboriginal Nations on their terms. Byrnes discusses the reliance of New Zealand surveyors on Maori knowledge, but also the way in which strange environs

175 Weaver, *The Great Land Rush*, 100.
176 King to Bowen, 18 October 1803, HRA III (i), 204.
177 King to Collins, 8 Jan 1805, 302; Meehan, 'Monmouth 0'.

were transformed into a familiar scene under the 'panoptic gaze' of the mapper.[178] The extent to which Meehan interacted with the Tasmanian Aborigines he encountered is unknown, although at the very least he must have been observed blundering through the bush with his instruments. The resulting map, however, displays the subsumption of indigenous land-use onto the blank British parchment, as Meehan described soil quality and potential uses for areas of land. 'Good pasturage', he declared of land near Hamilton, or 'Good land here with very few trees nearly flat', along the Coal River. His map records the land as it existed before the arrival of the Europeans, but translates the spaces from man-made seasonal hunting ground to places naturally suited for sheep-farming – without understanding the native tongue, he translated the marks of indigenous land use into something acceptable to the colonising force. It would be naïve to say Meehan had no comprehension of Aboriginal land management – there are numerous reports by explorers and colonists that connect the presence of 'natives' with fires, but the intricacies of the relationship between the people and land was almost certainly beyond his comprehension.[179]

In writing about the history of surveying in Van Diemen's Land, Alan Jones observes that the Risdon Cove settlement is absent from the *Monmouth 0* map, despite its existence at the time of surveying. He attributes this to the redrafting and finalising of the map in Sydney, when the Risdon Cove camp had been dismantled.[180] This happened after several serious problems emerged – the fresh water and grass dried in the summer, and rebellion brewed among some of the soldiers, but more significantly they quickly came into the conflict with the *moormairemener* people of the area, culminating in the Risdon Cove massacre. The details of this event have been disputed since they were first recorded by participant Lieutenant William Moore, with the victims numbered variously from three to several hundred.[181] Johnson and McFarlane have most recently queried these numbers with reference to the available weapons, and concluded that half a dozen victims was more likely than fifty.[182] This was the first time open hostilities broke out between the Tasmanian

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178 Byrnes, *Boundary Markers: Land Surveying and the Colonisation of New Zealand*, 62–70, 92–96, 105.

179 For example, see G.P. Harris, *Letters and Papers of G.P. Harris, 1805–1812: Deputy Surveyor-General of New South Wales at Sullivan Bay, Port Phillip and Hobart Town, Van Diemen's Land*, ed. Barbara Hamilton-Arnold (Sorrento: Arden Press, 1994), 70.

180 Jones, *Backsight*, 4.

181 For a concise review of the arguments see: Lyndall Ryan, 'Risdon Cove and the Massacre of 3 May 1804: Their Place in Tasmanian History', *Tasmanian Historical Studies* 9, no. 2004 (2004): 107.

182 Johnson and McFarlane, *Van Diemen's Land: An Aboriginal History*, 87–103.

Aborigines and the Europeans, who had set up camp on an indigenous site of significance.[183] How the violence began is unclear, but the soldiers fired at the Aborigines, in response to some perceived threat. Ryan observed that the colonial government sought to forget the event, but its magnitude was not lost on the settlers and it 'quickly became a founding settler narrative'. The site of Hobart had been chosen to replace Bowen's already fractious Risdon camp, and this massacre provided more confirmation of its unsuitability.

The absence of Risdon Cove on *Monmouth 0* creates an intentional silence, erasing the unsuccessful settlement from the visual record. The failure was too fresh, and to include it would have been to remind people that the dangers and costs could outweigh the adventure of expanding the Empire, as well as drawing attention to the people who were fiercely defending their land from the invading white presence.

In 1804 George Prideaux Harris arrived at Hobart Town. Appointed as Deputy Surveyor to Van Diemen's Land, he came with a 'wish to see the world', according to his friend and travelling companion, the mineralogist Adolarius William Henry Humphrey. A man of the law, with an interest in natural sciences and only passing knowledge of draftsmanship and surveying, Harris cannot have been the most qualified applicant for the role. Barbara Hamilton-Arnold, in her introduction to his collected letters, attributes his success to his family background and apparently incorruptible nature.[184]

One of Harris' first tasks was to follow the route of the Hobart Town Rivulet up into the hills of Mount Wellington (or Table Mountain as it was then known). The purpose of this was to establish the reliability of the water source, and to investigate the land quality along the river edges. The surviving map (*Hobart 10*, figure 17) shows an interest in the ground until the Guy Fawke's Rivulet (or West Branch as Harris named it) joins the Rivulet, after

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[183] The descriptions of the area, particularly of the open grass, suggest it had been fire-stick farmed as part of the mosaic system described in Chapter Six. In an archaeological excavation of the site, Angela McGowan found signs of occupation for at least 8,000 years, including an Aboriginal tool-making site. (P. Edmonds, *Settler Colonialism and (Re)conciliation: Frontier Violence, Affective Performances, and Imaginative Refoundings*, Cambridge Imperial and Post-Colonial Studies Series (Basingstoke: Palgrave Macmillan UK, 2016), 126; Angela McGowan, *Archaeological Investigations at Risdon Cove Historic Site: 1978–1980* (Tasmania: National Parks and Wildlife Service, 1985); cited in Ryan, 'Risdon Cove and the Massacre of 3 May 1804: Their Place in Tasmanian History', 118.

[184] Humphrey would go on to become an influential landowner, public servant and the chief magistrate in Hobart, after a decade spent exploring the island for useful land and resources. G. H. Stancombe, 'Humphrey, Adolarius William Henry (1782–1829)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 12 April 2017, http://adb.anu.edu.au/biography/humphrey-adolarius-william-henry-2212.; Harris, *Letters and Papers of G.P. Harris, 1803-1812*, 14.

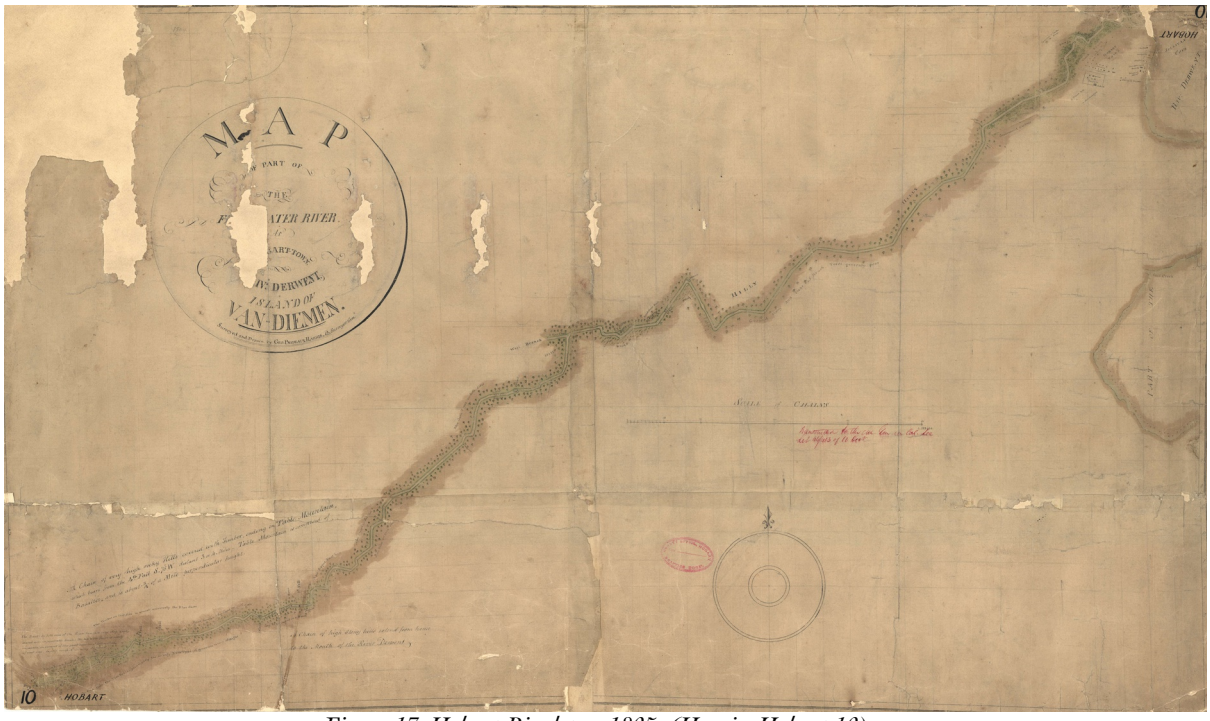

Figure 17: Hobart Rivulet, c. 1805, (Harris, Hobart 10).

which it lists only tree types.[185] The settlement was not expected to spread right up the mountain – the foothills would be targeted for timber rather than farming. This plan was fulfilled when Peter Degraves was granted land for a timber camp in 1824, with a boundary at approximately the entry of Guy Fawke's Rivulet.[186] Other routes and surveys taken by Harris included Bruny Island, Betsy Island, River Huon and Storm Bay, several trips to Port Dalrymple in the north, and from east to west to establish the dividing line between the short-lived counties of Cornwall and Buckingham. Although unstated, it is assumed his assistants were all convicts, with little to no experience in surveying. In 1808 Harris told his brother that he spent about six months measuring out farms for the Norfolk Island evacuees coming to the Derwent settlement, at New Norfolk.[187] He estimated that

185 May be the McRobie's Gully Creek – the ADB records that Degraves diverted the Guy Fawkes to meet the Hobart Rivulet. Both are close to the eastern boundary of Degraves' land. G.P. Harris, *Hobart 10: Plan of Part of Freshwater River at Hobart Town*, c 1805, c 1805, AF 394/1/9, TAHO, http://stors.tas.gov.au/AF394-1-9.

186 James Meehan and G.W. Evans, *Buckingham 4A: Parish of Queenborough Approved by Lachlan Macquarie (Copy)*, 1814, 1814, AF 396/1/4, TAHO, http://stors.tas.gov.au/AF396-1-4.

187 The evacuees were sent to several locations around the island – New Norfolk, as well as Norfolk Plains in the north of the island, and Pitt Water, east of Hobart. See also Meehan and Evans, 'Monmouth 3'; James Meehan and G.W. Evans, *Monmouth 1: Plan of Rokeby Township and Surrounding Allotments Signed by Lachlan Macquarie*, 1814, 1814, AF 396/1/207, TAHO, http://stors.tas.gov.au/AF396-1-207; James Meehan and G.W. Evans, *Cornwall and Westmorland 1: South Esk River, Lake River, Norfolk Plains, Port Dalrymple, Signed by Governor Macquarie*, 1814, 1814, AF 396/1/1325, TAHO, https://stors.tas.gov.au/AF396-1-1325; Meehan and Evans, 'Buckingham 4A'.

he had measured three to four thousand acres, work that would need to be completely redone six years after his death.[188]

Through his work, Harris furthered the colonial incursion into Van Diemen's Land. By charting the land, he commodified it and made it possessable within western legal parameters. This frontier push, however, was mobile, as he moved through the land and then left it. On paper the land was apparently being brought under control as he noted the details, but on the ground his movement was a momentary interruption. Nonetheless, his expeditions helped to bring the land under British control, by naming and measuring his way across the mountains and plains he encountered. The immediate effect on the Aboriginal Nations he passed through may have been negligible, but the foundation for future expansion and systematic expropriation of Aboriginal land was being laid.

Harris worked in extreme conditions, although few maps exist from these earliest years of exploration in Van Diemen's Land. He constantly requested paper of his family, writing short letters and using cross-hatching to make his supplies go further.[189] Such shortages were common throughout the colony – Harris complained to his brother Henry that servants have stolen his paper, and surviving records from this period are sometimes written on parchment.[190] This raises questions about how much paper was available for map drafting and survey journals. He was also placed in the position of imposing an unwieldy pre-determined plan on the landscape. In later years the practice of settlers pushing out their own boundaries into the grants of their neighbours lead to intense disputes.[191] Illicit expansion was common throughout the colony, right from the earliest days. New settlements, such as New Norfolk, were often surrounded by thousands of acres of 'unclaimed' Crown land. Until the increase of free settler emigration in the early 1820s there was nothing to stop the possessor of a thirty acre grant from spreading out into the hills, particularly to graze stock or source timber. But even for the best-intentioned grantee the physical boundaries could be elusive. Boundaries were marked with notched or painted trees, and landholders relied on local knowledge to maintain them. Public notices cautioning against trespass noted that the boundaries were 'known to Stock-keepers', or

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188 Harris, *Letters and Papers of G.P. Harris, 1803-1812*, 99.
189 Harris, *73*, 82.
190 Harris, 95.
191 McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 36.

list them according to neighbouring properties and landmarks.[192] Twenty years after the Risdon Cove camp, Bigge reported a conspicuous lack of fencing around Pitt Water – 'except upon an estate of Colonel Davey and one of Mr Lord, I did not observe a single fence.'[193] It is no wonder that the newspapers were full of cautions about trespass by both people and stock.[194]

Towards the end of his life, only six years after arriving in Van Diemen's Land, Harris became embroiled in a dispute with powerful military settler, Lieutenant Edward Lord. Ostensibly, the argument stemmed from Harris' failure to recognise Lord's authority, but the underlying causes related to the former's dogged sense of justice.[195] On his death in 1810 Lord reported to Governor Macquarie that Harris' papers were in a 'very deranged State.'[196] This indictment on Harris' work sounds scathing, particularly when read alongside Macquarie's opinion that 'Negligence or ignorance' of the 'very Indolent and dissipated Man' necessitated a complete resurvey of the particular areas. Macquarie did not rely entirely on Lord's words, stating that he received daily complaints from settlers, and that surveying incompetence lead to 'bitter animosity and litigation.'[197] This was perhaps not surprising as Harris was untrained in surveying.[198] To some extent, the maligned Deputy Surveyor was merely a convenient and plausible scapegoat. His inexperience in surveying must have affected the quality of his maps, but his adherence to justice and the law also made him powerful enemies and influenced public perception towards his work. In the absence of many surviving charts, the quality of his work is hard to judge, and the hyperbole of his contemporaries difficult to temper. There can be no doubt that Harris, and his successors, was being held accountable for factors entirely beyond his control. Not only this, comparing an imagining (for it can only be imagined in its absence) of his work with Meehan's surviving surveys of New Norfolk and Norfolk

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192 'Classified Advertising', *The Hobart Town Gazette and Southern Reporter*, 10 August 1816. For more discussion on informal boundary markers, see Chapter 3 of Drown, 'An Apparatus of Empire'.

193 Bigge, *Report on Agriculture and Trade in N.S.W*, p.25.

194 For example see: C.E.H. Cox, 'Classified Advertising', *The Hobart Town Gazette and Southern Reporter*, 4 December 1819; Edward Garth, *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 12 May 1821, http://nla.gov.au/nla.news-article1089446; John Abbot and W.T. Stocker, 'Classified Advertising', *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 21 May 1824.

195 For a more detailed sense of this see Part II of Harris, *Letters and Papers of G.P. Harris, 1803-1812*, pp.105-43.

196 Lord to Macquarie, 14 December 1810, HRA III (i), 454.

197 Lord to Macquarie, 14 December 1810, 464; Macquarie to Liverpool, 17 November 1812, HRA III (vii), 589.

198 Meehan also considered him not very good at his job, see Meehan to Macquarie, 8 July 1815, HRA III (ii), 571–72.

Plains (as it tempting to do) continues a fallacy of colonial (and modern) cartography – that what is on the map represents what is on the ground.

In 1813 Meehan was instructed to be present to 'point out to each Settler his own Farm in Norfolk Plains'.[199] Prior to this there is no evidence of an organised system for granting land to a large group, and five years earlier in New Norfolk the new arrivals had found themselves deeply disappointed with their circumstances (leading in part to the earlier accusations of incompetence levelled at Harris).[200] The obvious question, with a surprisingly elusive answer, is how was land allocated to that first group directed to settle up the Derwent River, twenty kilometres north of Hobart? Had Harris been expected to take a team of government men out to clear and peg out the boundaries, welcome the newcomers in, then to draft the plots as a chart, while all the new inhabitants settled into their allotted spaces? Or was it rougher than that; the grantees sent up the river with little guidance bar an aspirational plan? And therefore, what did Harris actually record – what the settlement was supposed to look like, or what it looked like on day one? Meanwhile, Meehan's 1814 re-survey of the area, intended to clean up the mess of Harris' work, captured a closer reality – a settlement after seven years of use.

In all, it is impossible to judge the extent of Harris' own shortcomings on the resulting Van Diemonian landscape. In practice there were hundreds of individuals who chose boundaries and made decisions without reference to him. Harris lacked the ability to stop informal marking out of grants, nor did he have the resources to correct errors. As Colonial Surveyor, however, he was the obvious person to blame when those boundaries were subsequently contested.

Stage Two: 1812 to 1820

The decade between Harris and the arrival of Thomas Scott in 1821 was a period of change, as land granting priorities shifted from the early practice of encouraging self-sufficiency through the allocation of small grants to many individuals (including former convicts), to opening substantial tracts for wealthy free settlers. For the first decade of the colony, the settlers were confined to small areas. Fels attributes the majority of pre-1812

[199] Governor Macquarie to Captain Ritchie or Officer commanding at Port Dalrymple, 6 February 1813, HRA III (ii), 27.

[200] Governor Macquarie to Captain Ritchie or Officer commanding at Port Dalrymple, 6 February 1813, HRA III (ii), 27.

violence by Europeans against the Tasmanian Aboriginal people to bushrangers rather than settlers, as the newcomers and indigenous peoples moved around each other without more than passing encounters.[201] As land grants multiplied and expanded the contact zone also grew, and the Tasmanian Aborigines were usurped from their lands. Tensions between the groups slowly started to increase, leading to outright hostilities by the 1820s.

Stage two of settlement, and its surveying, was the adolescence of the colony: awkward and ungainly, with rapid and unexpected changes. The Survey Office in this period was characterised by more incompetence, but rather than a lack of skills, a lack of surveyors plagued the island colony. After George Prideaux Harris died in 1810, the Derwent River settlement was left without a surveyor for eighteen months.[202]

Officially, therefore, no land was granted until James Meehan and George William Evans arrived to take on the role in a newly unified Van Diemen's Land.[203] In reality settlers claimed and cultivated land throughout this period, introducing a system that would cause havoc in the records for decades to come. The process of granting land was riddled with delays that the understaffed Survey Office could do little to alleviate. In his instructions to Evans, Governor Macquarie emphasised that no land was to be granted without his express authority. Only if it was required with expedience could Lieutenant-Governor Davey approve the grant, with the details to be sent to Macquarie as soon as possible.[204] The slow speed of communications between Van Diemen's Land and Sydney (not to mention the months it took for correspondence to travel to and from Britain) presented a significant disadvantage for administrative organisation.

In 1820 Evans was questioned by John Bigge on the state of land grants as part of his report into the colony. His responses shed light on the process of granting land, although

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201 Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11', 59.

202 'As there is no Surveyor at present at the Derwent, you will not have it in your power to locate Lands to the several Individuals who have made application to me for them until Mr. Meehan's arrival there.' Macquarie to Geils, 8 February 1812, HRA III (i), 464–65.
At Port Dalrymple, assistant deputy surveyor Peter Mills had been sent down in 1807, with Governor Bligh instructing Lieutenant-Governor Paterson to give him a trial, and retain him if found to be both qualified and needed. He was considered to be 'still more ignorant' than Harris, and disgrace followed his name until he was lost at sea. (Bligh to Paterson, 16 July 1807, 670.{Macquarie to Liverpool, 17 November 1812, || -Watson, 1921 | p. 589| |zu:2636435:TJ4ZQ79B}; 'Mills, Peter (1786–1816)', *Australian Dictionary of Biography* (National Centre of Biography: Australian National University, 1967), http://adb.anu.edu.au/biography/mills-peter-2458/text3287.

203 On the 1st of July 1812 the two separately governed counties of Cornwall and Buckingham were combined by Governor Macquarie, with Hobart Town the commanding town of the settlement. (Macquarie to Gordon, 12 June 1812, HRA III (i), 722.

204 Instructions to G.W. Evans, 27 May 1814, HRA III (ii), 560–61.

ambiguity remains about the order of events. Evans recounts that a settler would arrive, and approach the Lieutenant-Governor with their letter of introduction. He would approve (or deny) their request, and send the list to the Survey Office. Evans then

> 'shd. Proceed to mark off the quantities of Land, when at Leisure, in the situations that the Persons may have chosen… When the quantities are measured and marked off, I make out the Description and Boundaries, which I forward to The Surveyor Genl. at Head Quarters. From him they are sent in to the Govr. who directs Grants to be made out in pursuance to the Description.'[205]

The delays created a system that was adopted by settlers almost immediately. A location order allowed someone to live on the land and treat it as their grant, without any of the protections (or obligations) that came with an actual grant under the understanding that the formal grant would be made in time. In later years, this system would cause mayhem, as people sold land under location order, only for it then to be formally granted to the original landholder. This and other manipulations of the system caused many of the systematic surveying problems that will be discussed later in this chapter.

By necessity the Survey Office became more organised, a development visible in the surviving records. The pressure on surveyors in the Colony of New South Wales complicated the issue. Governor Macquarie rued his inability to spare 'the Surveyor' from Sydney in 1812, due to the arrival of new settlers there.[206] He managed, however, to eventually send Meehan and his Deputy Evans in June with instructions to remeasure all the old grants, and mark out new ones. They were to start in Port Dalrymple then travel overland to the Derwent to deal with the grants there. Where Harris' overland explorations had been fleeting intrusions into the land, Meehan was instructed to make overt claims of possession as he chained (measured) the distance between Hobart and Launceston, and placed finger or signboards along all the major routes he travelled.[207] Together, Meehan and Evans completed these tasks, and then Meehan returned to Sydney, where he was made the Deputy Surveyor of Lands in the Territory of New South Wales, while Evans became Deputy Surveyor of Lands in Van Diemen's Land.[208]

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205 Examination of G.W. Evans, 22 March 1820, HRA III (iii), 318.
206 Macquarie to Geils, 1 June 1812, HRA III (i), 484.
207 Instructions to J. Meehan, 25 June 1812, HRA III (ii), 517–22.
208 Macquarie to Bathurst, 7 October 1814, HRA I (viii), 305.

In terms of experience, these two men were significantly more advanced that Harris. Meehan has already been introduced, and had almost a decade of experience in both Van Diemen's Land and the mainland. Evans had a background in engineering and architecture, with some training in surveying. But Evans was also recalled to New South Wales several times, leaving Van Diemen's Land without a surveyor to tackle the growing mountain of survey requests.[209] Under Governor Macquarie's direction, administration in the Australian colony was revolutionised. Regular musters of all settlers – free, convict, men, women – reveal a picture of a colony growing and expanding rapidly. Not only were more grants awarded, but they increased in size, especially as wealthy settlers came to claim what they could not find in Britain – large, unclaimed (to the British eye) spaces in which to establish successful agricultural businesses. Despite this, until 1821 there were still only three surveyors in New South Wales and Van Diemen's Land. Every surveyor could apply for men, provisions and tools from the commanding officer of the settlement, but as with Harris, the assistants were likely to be untrained convicts.

The experience of Meehan and Evans shows in the maps that can be definitively dated to this period, particularly the 1814 maps of New Norfolk (*Monmouth 3*) and Norfolk Plains (*Cornwall 1*, figure 18). Where previously it was noteworthy that a map had been 'principally taken by the Theodolite', a higher standard of accuracy was now expected.[210] The precise tools used is not recorded, but even in the 1830s the surveyors were complaining about the deficiencies in their equipment.[211] It is assumed that theodolites were used where possible, falling back onto rudimentary methods when the more accurate instruments were broken or otherwise unavailable. Nonetheless, the improving standards are apparent, these charts are clear and precise, and can be lined up fairly accurately on a modern map. Where the earlier *Monmouth 0* and *Hobart 10* were focussed on soils and trees, the 1814 maps had a completely different purpose. The land had been controlled, a grid laid over, with each square allocated to a specific person. These charts were intended to keep track of where people were located, and how much of the land remained available for the taking, while reinforcing British domination of it.

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209 Orders to travel from and to Hobart given: 25/1 - 18/7/1815, and 12/12/1816 - 1/12/1818, HRA III (ii), 73; 116; 172; 371.

210 Meehan and Evans, 'Monmouth 3'; Meehan and Evans, 'Cornwall and Westmorland 1'; King to Collins, 8 January 1805, HRA III (i), 305.

211 'Assistant Surveyors' Weekly Returns of Work Performed, With Quarterly Summaries'.

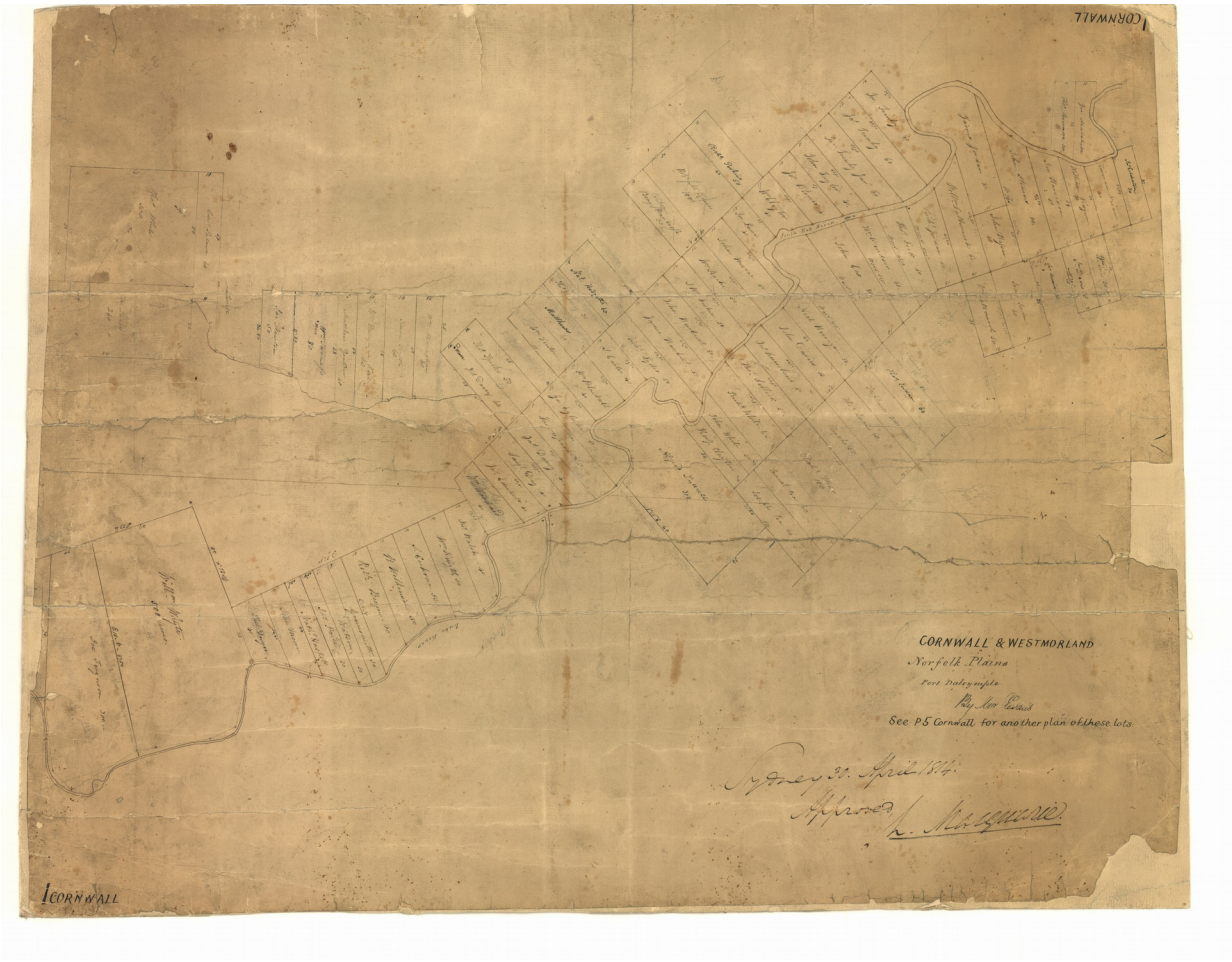

Figure 18: Norfolk Plains, 1814 (Evans, Cornwall 1).

Earlier in this chapter, it was speculated that a lack of maps from the earliest years of British inhabitation could have been related to a lack of paper, or possibly the deficiencies of the surveyors. What should be remembered, however, is that those maps were of the settled areas, which were still only small for the first fifteen years of settlement. The push to record more may not have been strong, Harris may not have exerted himself, but neither was more requested of him. By 1820, however, expansion was increasing exponentially, and new districts were opening up with great frequency. Now the surveyors were struggling even more to keep up with demand.

Significantly this decade saw a shift in the dominant settlement pattern. These patterns are explained in greater detail in the following chapters, but with the arrival of free settlers came a significant transition from the smaller riverine intensive plots, to larger intermediate free and open extensive patterns. Where the emancipist settlements had largely consisted of small blocks (thirty to eighty acres), now the government made blocks of 1000 acres or more available. The river-edge settlements had been tightly packed, with rows of properties

stretching back from the river. One mis-measured property width could throw out the whole row, but there were also fewer measurements to take once the back line had been set. *Cornwall 1* demonstrates this clearly – the variation in size is manipulated by the width rather than the length of each block, as a straight line runs along the back of all the properties on both east and west banks of the river. With an influx of free settlers, claiming much larger blocks that often stood apart from all other grants, the pressure on the surveyors increased as they had to deal with the challenges of two very different patterns.

The long-lot's appearance (both the small riverine intensive and larger intermediate free) suggests it ignores topography – it is a classic product of British colonial ideals imposed onto an imagined flat land rather than the hilly reality. For the surveyor, a backline could be set and then the widths divided off for a batch of plots; the boundaries for each grant were shared and therefore co-dependent. Hills and significant river bends would require a new backline, but the biggest problem was to ensure that the long boundaries from river to backline were correctly spaced. Open extensive grants, on the other hand, required fewer divisions, but they were chosen to include superior land, and often stood alone from any other grants. Their size could exceed one thousand acres, and a surveyor was supposed to measure all boundaries. Often straddling a combination of open plain and wooded hills, they could involve a lot more travel and rough access for the surveyor. Combined, these two patterns ensured that a great deal of a surveyor's time was spent travelling, both from site to site and within site boundaries.

In 1820, a new surveyor arrived in the colony. At first he oversaw the government stock, but was quickly sent to help Evans. At only twenty years old, Thomas Scott was the first surveyor in Van Diemen's Land to have been trained specifically in the discipline, and he would make his mark by charting large areas of land over the next twenty years.[212] With his arrival, the total number of surveyors stationed in Van Diemen's Land doubled, to two. Each had his own task, in the early 1820s Scott travelled through the Midlands and up the east coast, measuring and recording as he went.[213] Evans meanwhile, following Lieutenant-Governor Sorell's orders, drafted a map covering the whole island.[214] Such a map had first

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212 G.H. Crawford, 'Scott, Thomas (1800–1855)', *Australian Dictionary of Biography* (National Centre of Biography: Australian National University, 1967), http://adb.anu.edu.au/biography/scott-thomas-2643.
213 Crawford; Arthur to Bathurst, 9 June 1824, HRA III (iv), 153.
214 Sorell to Skinner, 18 January 1820, HRA III (iii), 150–51.

been requested obliquely by Governor Macquarie in 1814, but it was only after Lieutenant-Governor Sorell requested it outright in 1820 that Evans started the task.[215]

Between 1826 and 1828 a team of Land Commissioners, Roderic O'Connor and Peter Murdoch, under the supervision of deputy surveyor Edward Dumaresq, travelled throughout the colony of Van Diemen's Land. They were surveying and valuing land, and recording the conditions they found. Looking back at the work of the previous two decades they complained about the corruption of the earlier departments.[216] While bribery may have been a common part of bureaucracy, and will be discussed shortly, it is worth pausing here to consider the importance of accurately locating land in the first fifteen years of the colony.

The island of Tasmania consists of nearly 17 million acres of land, a mere 0.3 percent of which had been granted by the end of 1816 – approximately 50,000 acres.[217] By 1823 Sharon Morgan calculates that a further 525,184 acres had been granted out, making a total of 3 percent granted by the early 1820s.[218] Calculating according to the amount of land present is misleading, however, as even today Tasmania has large areas that are inaccessible and have never been alienated. In 1825 Arthur wrote of the land between Hobart and Launceston that 'within this space, the Land is generally very fine, and some other portions are inviting; but all the Country to the Westward is very mountainous, the climate severe, and during five Months of the year covered with snow…' But this is not a concession of defeat, he assured Bathurst, it too could be 'subdued by industry'.[219]

The rate of expansion tells a more accurate picture. By 1820 new arrivals were writing home complaining that 'all the best lands in the intermediate distance are granted.'[220] In the seven years after opening the colony for free settlers, the number of acres alienated had expanded tenfold. Prior to this, when grants were interconnected and of relatively small acreages, it was of little consequence if they stretched back further or were wider than allocated – they were islands within a sea of Crown land (figure 19). Frankland noted the

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215 '… and furnish me, with as little delay as possible, with a general Chart or Map of the Settled Parts of Van Diemen's Land …' - Instructions to G.W. Evans, 27 May 1814, HRA III (ii), 562; Sorell to Skinner, 18 January 1820, HRA III (iii), 150–51.

216 McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 36.

217 Sharon Morgan calculates 49237.5 acres, based on lists at LSD354, but several unlisted grants have also been found, making 51165 acres. *Land Settlement in Early Tasmania*, 13.

218 Appendix 1 Morgan, 165–69.

219 Arthur to Bathurst, 10 August 1825, HRA III (iv), 315.

220 William Williamson quoted in Boyce, *Van Diemen's Land*, 146.

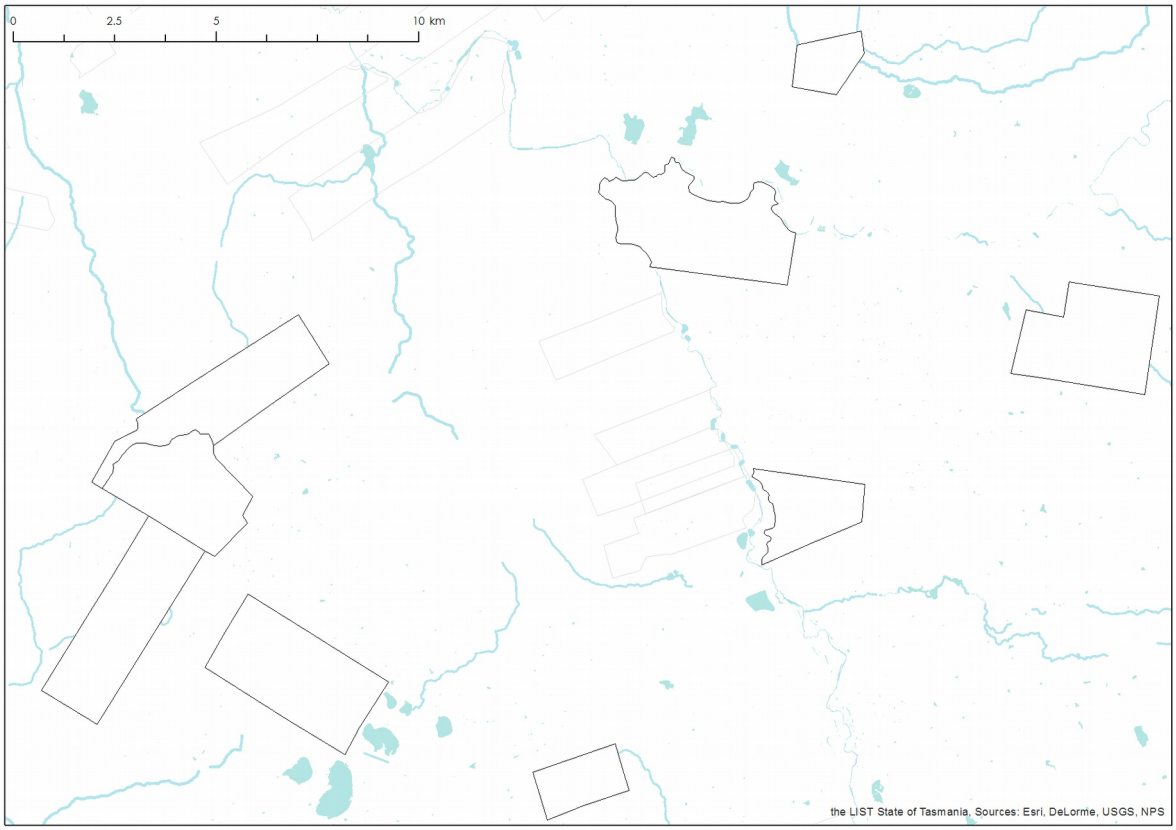

Figure 19: large grants surrounded by Crown Land, near Ross (basemap: LISTmap).

casual manner of measuring these long-lots: 'Until the year 1825 … the side lines were seldom measured many hundred yards beyond the river bank. It was left to tho (sic) fencers to produce these lines to the rear…'[221] In these formative years the surveyors were overworked and under-skilled, but also uninterested in precision.

As free-emigration increased to Van Diemen's Land, so too did the size of land grants. Jumping from an average of 97 acres in 1813 to 155 in 1817 and 430 in 1823 the system was reliant on the government to open areas of land for settlement.[222] When settlers complained about a lack of land, they were referring to the officially opened areas. In 1821 the River Clyde settlement, later renamed Bothwell, was opened and the pressure briefly alleviated. Where previous settlements were populated with small grants, however, now they were being claimed faster with much larger grants. Stretching into the surrounding land became impracticable. In 1825 Arthur lamented 'The great misfortune seems to have been portioning out the Valley in such extensive Grants!'[223] The need for accuracy

221 Frankland, *Report on the Transactions of the Survey Department*, 15.
222 Calculated from Appendix 1 Morgan, *Land Settlement in Early Tasmania*, 165–69.
223 Arthur to Bathurst, 10 August 1825, HRA III (iv), 315.

increased as every acre of Crown land became prime real estate, but the ability of the department to deliver did not.

Stage Three: 1820 to 1825

> 'I feel it my duty also to submit to Your Excy. the greatly increased and increasing business and duty in the Depy. Surveyor's Office, arising from the great influx of New Settlers and depart't are very pressing in both Settlements, and the farther examination and survey of the interior Country and Coast become indispensable, I beg leave to recommend the nomination of an assist't in the office of The Dy. Surveyor.'[224]

When Lieutenant-Governor Sorell made this request to Governor Macquarie, it marked an attempt to set up a professional Survey Office. It is no coincidence that the precise location of an office cannot be found prior to 1826. This reflects the lack of importance given to the surveyors by the colonial officials until the 1820s, when they were finally identified as being in either Murray or Argyle St.[225] In naming Scott as best candidate for the position, Sorell hoped to lay the groundwork for a much-improved system for delineating land boundaries. Scott, however, was thrown straight into the work and found himself hard pressed from the start. By the end of the decade, allegations of corruption were once more levelled at the surveying team, affecting Scott's standing in the department. In order to save time, Scott copied older plans made by Evans, that he took to be accurate because they were signed off by Governor Macquarie: 'Mr Scott admitted that he drew this plan, but states that he copied it from an older one made by Mr Evans.' Outrage followed when it emerged that this signature was made in 1814, but that information on the plan post-dated it.[226] The priority for the Survey Office appears to have been to pursue the work of measuring out new grants, rather than confirming or adjusting old ones. To resurvey much of this land required intense effort and time, while new settlers were clamouring at the Survey Office, and Government House was making 'polite but pressing enquiries' about the state of applications for land.[227]

Some of these copied maps still survive, with annotations showing alterations over time. *Monmouth 4*, for example, was first surveyed in 1818 (by Evans), and then updated by Scott

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[224] Sorell to Macquarie, 13 June 1821, 15.
[225] 'Advertising', 11 November 1826; Bent, *The Tasmanian Almanack for the Year of Our Lord 1825*, 76.
[226] Arthur to Bathurst, 3 March 1827, HRA III (v), 545.
[227] Jones, *Backsight*, 35.

four times (figure 20).[228] The biggest change on it, however, is the addition of names in different handwriting and pens – pencil drafts are visible underneath the pen, new blocks have been drawn in, with names scrawled as they were granted. There is no indication that the base survey of hills and rivers has been updated, nor that the the earliest drafted blocks were resurveyed.

It was within this context that later allegations of corruption were made. These were not, however, straightforward accusations of accepting money for larger blocks. They were entwined in arguments about inadequate pay and fringe benefits – provision of a forage allowance for Evans' horse, and gifts and other perks he is reported to have received from grateful settlers.[229] Henry Melville derided the system, suggesting that only those settlers who were 'friends' or brought 'a hogshead of wine, a piano-forte, or a harp, or such like present' would receive any help from the Survey Office. Indeed, he accused the Office outright of obstructing those who did not supply such favours.[230] When Sorell told Bathurst he had received no instructions from Macquarie in the three years since 1821, he was also attempting to defend his actions and mitigate any ill-informed instructions he had given.[231]

Figure 20: Monmouth 4, with notes enlarged.

When Harris and Meehan worked in Van Diemen's Land, they concerned themselves predominantly with measuring and marking out land for former convicts and members of the military. There were few free settlers, and they were employees of the government or other men of means. By the 1820s, however, a new class of settler had started to arrive – men of means who were impatient to take control of land grants. They brought letters of support from influential patrons, and therefore believed they were entitled to immediately

228 Scott, 'Monmouth 4'.
229 Jones, *Backsight*, 29, 35, 44.
230 Melville, *The History of Van Diemen's Land*, 116–17.
231 Sorell to Bathurst, 24 August 1824, HRA III (iv), 564.

take up their new acreages. Although Scott was a trained surveyor, his education did not make him anything more than a tradesman within the hierarchy of the colonial government. The Survey Office, however, had disproportionate power to enable or obstruct the granting of land to every person who requested it.

The case of the settler William Effingham Lawrence serves as one illustration of the complicated hierarchy of the colony in the 1820s. Lawrence and Arthur became embroiled in an argument over the former's land grant, after Arthur discovered he had been granted significantly more than was permitted – 8000 acres granted by Sorell when Macquarie's instructions did not allow for more than 1000 acres. Lawrence argued he had been given 2000 acres, plus 2000 in reserve, and his brother had received the same. His brother, however, never arrived in the colony, and Lawrence assumed the control of all 8000 acres, plus an alleged extra 4000. Scott informed Arthur that he had measured the grant, and was aware of its increased size, but was merely following the orders of Evans. In the discussion that follows it becomes apparent that common practice (or a common excuse at least) was to exclude so-called bad land, such as marsh and swamp, from the total acreage.[232] The manipulation of British conceptions of land quality to suit settler purposes is discussed further in Chapter Seven.

In 1824 two more surveyors joined the team, although Evans' successor Dumaresq thought they were severely under-appreciated and under-used.[233] William Sharland was employed initially as a clerk, and was kept at clerical duties even after promotion to assistant surveyor, while John Helder Wedge was sent out to explore some of the wilder regions of the north-west and central highlands.[234] Although conditions had changed – increased surveyor numbers, larger grants, more settlers and districts – Evans essentially kept the Survey Office running as it had always operated, although due to a larger team he had significantly larger resources to draw on. Both Evans and Scott had completed large maps of the entire island by 1824, an important stepping stone which subsequently aided a serious shakeup of the state of surveying in Van Diemen's Land. Much of this history is summarised in the first cohesive account of the Survey Office, written in 1837 by Surveyor-General George Frankland for the new Lieutenant-Governor, John Franklin. As

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[232] Arthur to Bathurst, 11 August 1825, 316–18.

[233] Dumaresq to Burnett, 19 January 1827, HRA III (v), 564–65.

[234] 'Sharland, William Stanley (1801–1877)', *Australian Dictionary of Biography* (National Centre of Biography: Australian National University, 1967), http://adb.anu.edu.au/biography/sharland-william-stanley-2650.

he would tell it, prior to his governance of the Office (beginning in 1828), a 'carelessness of system' characterised the entire practice of land granting and surveying.[235] With such comments, Frankland attempted to assume all responsibility for coaxing the system into respectability. His arrival certainly coincided with a marked improvement in the standard of work completed by the Office, as Frankland was answerable to Lieutenant-Governor Arthur, who insisted on a new regime of accountability and structure.

Stage Four: 1825 to 1835

This chapter opened with a public notice announcing the move of the Survey Office to new headquarters in Davey St. The move came at the beginning of a new era for the office, along with the arrival of Lieutenant Governor George Arthur in 1824 and acting Surveyor-General Edward Dumaresq in 1825. Dumaresq was one in a long line of military men who chose to emigrate to Van Diemen's Land on half pay and make a new life for themselves there. He was not trained as a surveyor, but Arthur notes that he spent five years in the East Indies 'on the very Service upon which we are now about to enter.'[236] Scott, however, claimed that his superior had no abilities in surveying:

> I have never seen him attempt to make a Survey or to calculate the content of any piece of land; that he has frequently confessed to me that he was ignorant of the method of surveying, until I explained it to him and, since that, he has often come to me to ask the length of a Chain. I have almost always been fixed upon to perform the scientific duties of the Department…[237]

The truth of this statement is difficult to determine, as only a few maps survive bearing Dumaresq's name as the surveyor (*Cumberland 55, 56, 58, 59*). All four charts cover the same property, Edward Lord's Lawrenny Estate on the River Clyde, and were part of an attempt to ascertain and record the correct boundaries of the property.[238] It is possible that they were surveyed by Scott and copied by Dumaresq. Nonetheless, the evidence suggests that Dumaresq was at least competent at administration, as he oversaw a series of reports into the state of land grants in Van Diemen's Land.

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235 Frankland, *Report on the Transactions of the Survey Department*, 12–13.

236 Arthur to Bathurst, 16 December 1825, HRA III (v), 17; Roger Page, 'Dumaresq, Edward (1802–1906)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University, n.d.), http://adb.anu.edu.au/biography/dumaresq-edward-2002.

237 Arthur to Bathurst, 4 April 1826, HRA III (vi), 133–34.

238 Dumaresq, 'Cumberland 55'; Dumaresq, 'Cumberland 56'; Dumaresq, 'Cumberland 58'; Dumaresq, 'Cumberland 59'. Cumberland 57 also shows this property but was surveyed by Wedge. It is annotated by Dumaresq: 'This plan is incorrect'. Wedge, 'Cumberland 57'.

By March 1826 Arthur had established the Commissioners for a Survey of Lands, and instructed them to conduct a circuit of Van Diemen's Land. Their purpose was four-fold: they were to divide the island into counties, hundreds and parishes, value the wastelands, identify sites for roads, towns and public uses, and for schools and glebe lands.[239] While the Land Commissioners Roderic O'Connor and Peter Murdoch travelled through all the settled districts, Dumaresq remained primarily in Hobart to oversee their work and ensure other tasks were completed.[240] One of the tasks was to compile a list of all the plans in the Survey Office, to send with his report about the Survey Office. Their range across the island shows how far surveyors had explored (figure 21). Some plans, however, date from the earliest years of British settlement, and had not been updated by the time of Dumaresq – a map of Black Brush to Pittwater from 1804 for example, or New Norfolk in 1814 (*Monmouth 3*, discussed earlier). *Buckingham 10*, a map of Elizabeth Town (now New Norfolk), surveyed in 1826 was apparently not complete in time to be included.[241]

The breaking of the island into parishes, hundreds and counties was significant. It marked the imposition of a British system onto a colonial landscape, a recommendation included in the Bigge Report. Rather than strictly adhering to the conventions of the system, Arthur asked the Land Commissioners to 'have regard for all such great natural divisions… high Lands, Rivers, Streams, Islands, or otherwise…'[242] This was to form clear boundaries that could be observed by anyone passing through, not only those people with a map of the area. In the years preceding this there had been no attempt to mark out district boundaries in any physical sense. By responding to the boundaries formed by the landscape itself, Arthur created a hybrid British-Van Diemen's Land system.

Although the obvious successor to Evans was Scott, Arthur did not trust him, calling on evidence of irregular practices in the Survey Office to support his claim. Instead, he suggested Dumaresq be installed as Acting Surveyor General, but this was rejected.[243] Eventually, a third option was suggested. Frankland would be sent from England to take up the position of first assistant surveyor, and became Surveyor General two years later.

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239 Arthur to Bathurst, 8 March 1826, HRA III (v), 120–25.
240 Introduction McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, v.
241 Return of plans in survey office, 3 March 1827, HRA III (v), 569.
242 Arthur to Commissioners of Survey, 8 March 1826, 123.
243 Arthur to Bathurst, 16 December 1825 , 16–17; Jones, *Backsight*, 46–47.

Arthur to Bathurst, 3 March 1827 (HRA III(v), p. 569)		Alphabetical List of Plans to accompany Report on the state of the Survey Department, etc., etc., under date January 1827
# in list order	**Year**	**Description**
3	1804	Black Brush to Pittwater
43	1804	Pittwater to Black Brush.
52	1812	Tamar River from Launceston towards George Town.
8	1814	Brown's River and North-West Bay
19	1814	Herdsman's Cove
20	1814	Hollow Tree and Kangaroo Point.
26	1814	Kangaroo Point and Hollow Tree
30	1814	Launceston from North to South Esk Rivers.
34	1814	New Norfolk
35	1814	Norfolk Plains
36	1814	North West Bay and Browns River
45	1814	Sandy Bay
17	1818	Green Ponds and Cross Marsh.
55	1818	Western River
58	1818	Western River, small part of
12	1819	Derwent River.
9	1820	Clyde and Shannon
32	1820	Macquarie Harbour
46	1820	Shannon and Clyde
4	1821	Blackman, Elizabeth and Macquarie River
13	1821	Elizabeth River and Lake Macquarie
14	1821	Elizabeth, Macquarie and Blackmans Rivers.
28	1821	Lake Macquarie and Elizabeth River.
33	1821	Macquarie, Elizabeth and Blackmans Rivers.
50	1821	Swan Port.
51	1821	Swan Port.
37	1823	North West Bay and Browns River
40	1823	Penny Royal Creek, Penny Royal Swamp and Western River
57	1823	Western River, Penny Royal Swamp and Pennyroyal Creek.
1	1824	Argyle, Queenboro and Glenarchy
16	1824	Glenarchy, Queenboro' and Argyle
44	1824	Queenboro', Argyle and Glenarchy.
5	1825	Break of Day and South Esk River
6	1825	Brighton
29	1825	Lake River
48	1825	South Esk and Break of Day Rivers.
18	1818, 21, 2, 3. & 4	Green Ponds, Lovely Banks and Jericho
31	1818, 21, 2, 3. & 4	Lovely Banks, Green Ponds and Jericho.
23	1818, 21, 23 & 4	Jericho, Green Ponds and Lovely Banks
49	1822-3	South Esk River.
54	1825 (2 copies)	West of Large Lake.
2	Copy	Bagdad Creek
10	Copy	Coal River.
25	Copy	Kangaroo Point
42	Copy	Pitt Water.
53	Copy	Tea Tree Brush.
56	Copy	Western River and Western Creek
41	Copy from Original Surveys	Pitt Water
22	Copy, 1818	Hollow Tree and Single Hill.
47	Copy, 1818	Single Hill and Hollow Tree
7	Copy, 1823	Brown's River and North West Bay
11		Derwent from Herdsman's Cove to the Clyde and Jordan from Herdsman's Cove to the Broad Marsh.
15		General Chart, Derwent, Pitt Water and Coal River.
21		Hollow Tree and Kangaroo Point.
24		Jordan from Herdsman's Cove to the Broad Marsh and Derwent from Do to the Clyde.
27		Kangaroo Point and Hollow Tree
38		Ouse River.
39		Penny Royal Creek

Figure 21: List of charts in Survey Office, 1827. Ordered by year (HRA).

Dumaresq stepped aside, Scott remained in the Survey Office with an increased salary, and Frankland took the reigns in 1828.[244]

Frankland took up his position in the department as the conflict with the Tasmanian Aborigines was escalating. Until the 1820s the relationship between the Europeans and Tasmanian Aborigines remained relatively calm. The Europeans were contained to only a few areas, and the two peoples could coexist with only the occasional confrontation.[245] As the European population expanded across Van Diemen's Land, the indigenous inhabitants of the alienated lands were pushed to the fringes. They lost access to the lands they had been cultivating for thousands of years, as the Europeans cut them off from Country. The people of the Tasmanian nations responded with violence, attacking livestock and farmhands, and setting fire to buildings. A direct correlation between European population (and land alienation by association of that) and increasing acts of aggression can be seen at figure 22.

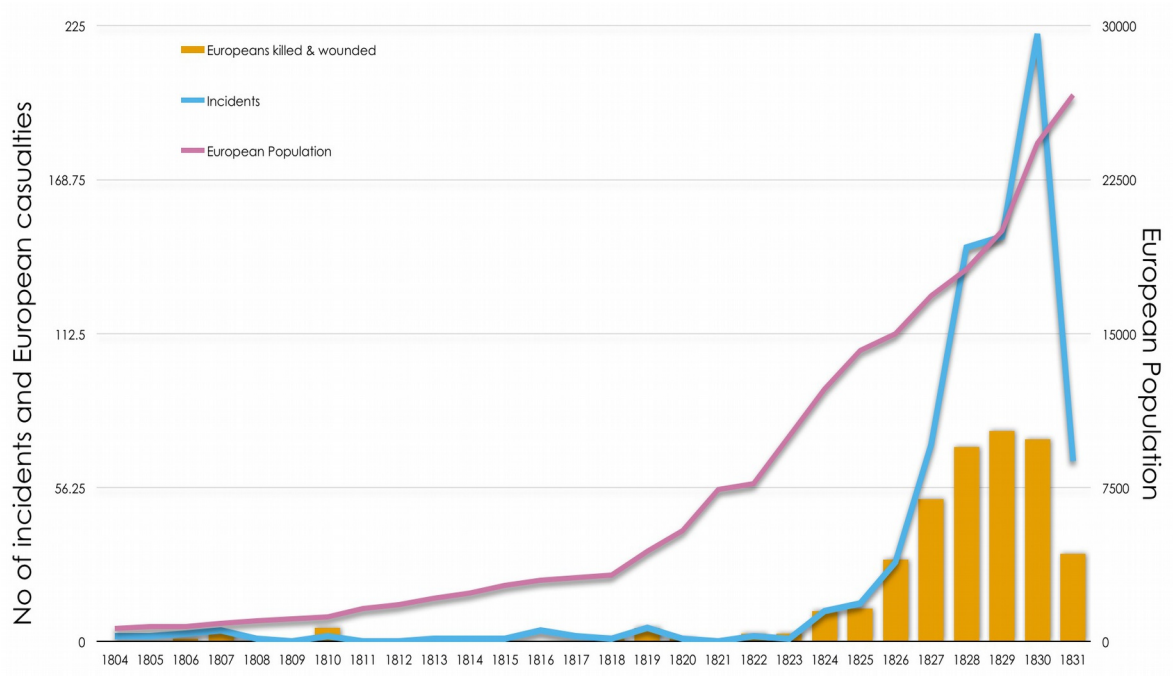

Figure 22: European population and the number of attacks recorded against the settlers (Maxwell-Stewart).

Where the surveying experience of Dumaresq is uncertain, Frankland had a clear pedigree, having worked as Surveyor-General in Pune, India before ill-health forced him to resign

244 P.R. Eldershaw, 'Frankland, George (1800–1838)', *Australian Dictionary of Biography* (National Centre of Biography: Australian National University, 1966), http://adb.anu.edu.au/biography/frankland-george-2064.

245 John Connor, 'The Tasmanian Frontier and Military History', *Tasmanian Historical Studies* 9, no. 2004 (2004): 95.

and return to the cooler climate of England, and then Van Diemen's Land.[246] Immediately, Frankland initiated a program of reorganisation in the Survey Office, including requiring surveyors to keep records of their work, and attempting to implement Arthur's orders for a complete trigonometrical survey of Van Diemen's Land. Although this has the appearance of an action designed to stamp out corruption and restore order to the land granting process, the evidence does not entirely support this.

In the Land Commissioners' Journals, Roderic O'Connor recounted the story of Richard Barker and John Terry at Macquarie Plains (neighbouring the settlement of New Norfolk).

> [Terry] also was granted fourteen hundred acres…but in consequence of Mr Barker of Hobart Town, having bought Fords' farm adjoining Terry's, and finding that he wanted no less than between one and two hundred acres deficient, took the Law, into his own hands, and seized upon part of Terry's, more food for the lawyers.'[247]

Barker took approximately 106 acres for himself, shown on the undated *Monmouth 128* as Terry's land, and the LDC as Barker's. Today, that illicit gain has been subsumed into a larger farm, but part of the boundary of that triangular piece of land snatched for Barker's property is preserved as a small section of road.[248] This culture of appropriating extra land appears to have been common in the early period, but Frankland's claims to have tidied up the properties of the island are undermined somewhat by the ongoing discrepancies between recorded and official acreages.

The LDC show that many landowners kept the extra land above that officially granted, and it was later measured out and legalised through formal recognition. And yet, the additional acres were not recorded on the chart – only the official size is shown, despite discrepancies sometimes amounting to several hundred acres. If the landholders were using the land when it was reassessed in the 1830s they were permitted to keep it, and the quit rent was adjusted to reflect this, but the fact remains that the extra acres were not acknowledged.[249]

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246 Eldershaw, 'Frankland, G.'

247 McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 36.

248 *Monmouth 128: Monmouth, Cumberland and Buckingham*, n.d., n.d., AF 396/1/337, TAHO, https://stors.tas.gov.au/AF396-1-337; Monmouth 2B 'LDC'.

249 West, *The History of Tasmania*, 110–13; Martha Rutledge, 'Stephen, Sir Alfred (1802–1894)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/stephen-sir-alfred-1291.

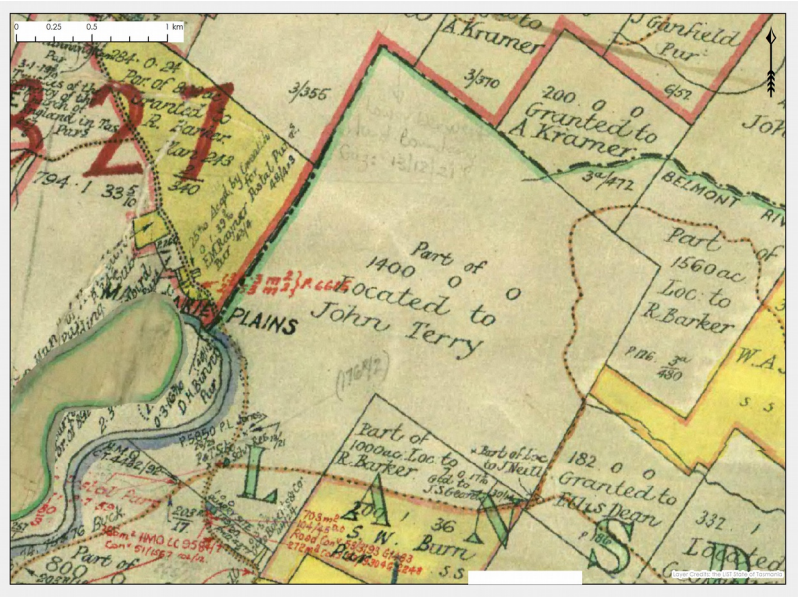

Figure 23: Terry's and Barker's properties at Macquarie Plains (LDC).

In his scathing discussion of the system, Melville cites 'numerous' cases when the landholder found he had been cultivating someone else's land, and was made a 'ruined man' on the discovery. Melville, however, placed most of the responsibility at the feet of Arthur. He claimed that Arthur's reign was totalitarian, conducted with a 'rod of iron', and accused him of 'resuming' land from absent landholders to give to his friends and allies, while never taking from government employees.[250] Although beyond the scope of this research, the validity of these accusations could be tested by identifying patterns in land acquisition over time.

Arthur's so-called profligacy was a response to rumours of imminent restrictions on land granting practices, restrictions that would be implemented alongside the Ripon Regulations in 1831. The catalyst was the increasing awareness and difficulties caused by inaccurate land surveys and descriptions. West gives the example of an abandoned 1823 grant, given by Sorell to another settler who spent a substantial £3000 on cultivating it, only for the original grantee to return fourteen years later and claim it for his own. It was therefore deemed impossible to say who was the rightful landholder. In 1831 Arthur adopted the recommendation of the Crown Solicitor Alfred Stephen, and declared that all existing grants were invalid and needed to be reviewed and regranted to the rightful possessor by the commissioners, Frankland and James Simpson. They usually found the landholder to be the person living on the land who had 'reputed ownership', although their decisions could be taken to a jury in the case of disagreements. This was another motive behind the complete reorganisation of the system. A caveat board was formed in 1835 to more effectively deal with the claims coming before the the commissioners.[251]

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250 Melville, *The History of Van Diemen's Land*, 117–21.
251 West, *The History of Tasmania*, 110–13; Rutledge, 'Stephen, A.'

At the same time as Arthur declared all grants invalid, the Ripon Regulations came into effect. West thought they were

> framed to obviate the theoretical and practical evils attributed to the easy acquisition of land; to terminate the prodigality of governors, and the frequent quarrels occasioned by their favouritism; and above all, to prevent labourers from becoming landholders, and the tendency of colonists to scatter over territories they can not cultivate.[252]

These regulations required Crown land to be auctioned, rather than granted, for a minimum of five shillings an acre. Land could no longer be granted, except in particular circumstances such as for soldier settlements. While Arthur supported and enacted Stephen's advice on clearing the confusion surrounding land ownership, he was not in favour of these changes. John West notes the frenetic granting out of land (West numbers 205 000 acres) in the few years before they were instated.[253] This suggests Arthur's motives were political – minimising what he foresaw as damage by the Ripon Regulations, and expressing his dislike of them – rather than favouring friends as Melville alleged. Naturally, the people who benefited from his politically-motivated actions may have been friends and allies. Testing this would be possible, by categorising the relationships land grantees had with the Lieutenant-Governor. This is beyond the scope of this research, but would make for interesting analysis.

Another explanation is given by Frankland – on finding that the 'old surveys were so desultory, so unconnected…so inaccurate', he thought it prudent to create a new general survey, 'not with the object of altering any old established boundaries…but for the purpose of ascertaining their true situation and extent.' He excused the time taken and potential errors, listing Government discouragement, difficult terrain, and the 'dogged reluctance' and 'frequent felonies' of the convict assistants as problems.[254] The surveyors were regularly recalled to the Supreme Court to give evidence on boundary disputes, and the weekly journals contain numerous references to equipment deficiencies.[255]

The final influence on the surveyors' ability to carry out their work in a competent and scrupulous manner was an increasingly militaristic government agenda. At this point there

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252 West, *The History of Tasmania*, 114.
253 West, 109–15.
254 Frankland, *Report on the Transactions of the Survey Department*, 18–19.
255 'Surveyor-General's Correspondence with District Surveyors, Miscellaneous Undated Charts and Tracings, and References to Plans' 1829, LSD 24/1/1, TAHO; 'Assistant Surveyors' Weekly Returns of Work Performed, With Quarterly Summaries'.

was a shift in focus, from advance to defence, as the settlers sought to protect their claim on the land they had previously expropriated from the indigenous inhabitants. The earliest maps of Van Diemen's Land focussed on resources and land conditions, with an eye towards future exploration and expansion. Then they were used to show both alienated land and tracts of country that might be alienated. They also noted the names of the claimants to each property. By the end of the 1820s charts reverted to showing the landscape, but now the sense of naïve wonder was lost to concerns of frontier defence. The first of these was made in 1826 by Scott, a *'Military Chart of Van Diemen's Land shewing all the Roads, Houses and Stations'* (figure 24).[256] This plan shows key landholders, and the routes through the land. It was intended to indicate the spread of settlement and mark the Justices of the Peace, to show possible military strongholds, and points of weakness. This was drafted when the colony was fighting both Tasmanian Aborigines and bushrangers. In 1825 the latter caused much consternation, had indeed 'excited great alarm among the Settlers in the Interior' and Arthur requested a larger military force, apparently to imbue confidence in the settlers rather than out of a necessity to actually use violence.[257] In a very short time the military target in Van Diemen's Land would shift, as the bushrangers were subdued, and conflict with the Aborigines escalated.

Figure 24: Military Chart of Van Diemen's Land, 1826 (Scott).

In October 1830 approximately 2200 soldiers, civilians and convicts set out to cross Van Diemen's Land. Armed with rifles, bayonets, clubs and swords, the intention was that they would end the hostilities with the Tasmanian

[256] Scott, 'Military Chart of Van Diemen's Land Shewing All the Roads Houses and Stations'.
[257] Arthur to Bathurst, 14 September 1825, HRA III (iv), 365.

Aborigines by killing, capturing or driving them from the settled districts. The Europeans were instructed to form several lines that would drive the Aborigines from their land down to the Tasman Peninsula, where they would live in the 'Establishment for the Aborigines'.[258] With only one month to prepare, the Survey Office was required to provide information about the terrain and routes the parties would find, a task Clements found they were woefully under-resourced for. Nonetheless, the deficiencies did not 'dampen the ardour' of the settlers, who were further incensed and incited by every act of hostility against them in the months before the operation.[259]

From this operation came Frankland's *Field Plan of Movements of the Military (No. 9)* (figure 25). This chart was printed in 1831, after the event.[260] It depicts the positions of various leaders on the week of the twelfth of October, and their future movements. In the two centuries since the Black Line, historians have argued about whether the line was a success or failure. Only two Aborigines were killed, with another fifteen surrendering afterwards. It did bring an end to hostilities, however, and Ryan argued that the October-November action was part of a fifteen-month campaign that subdued the remaining Tasmanian Aborigines through a powerful show of force.[261] It was an expensive endeavour for the colonial government, and this plan is an excellent example of a map being used as propaganda to mislead its audience. By laying out straight lines, with dates of current and future movements, and naming the participants, the chart has an air of confidence that belies the many difficulties that beset the operation – the gradual loss of morale as equipment and supplies ran out without hope of replenishment, the bad weather, each line's tenuous ability to locate itself in the bush, to name but a few.[262] Its purpose, however, was not to guide those on the ground, but to tell the story of subduing the 'natives' to the British back home, and justify the expense.

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258 As named on Thomas Scott, *Map of the Settled Part of Van Diemen's Land* (Hobart Town: James Ross, 1830), https://stors.tas.gov.au/AUTAS001142927565.

259 Clements, *Black War: Fear, Sex and Resistance in Tasmania*, 126–27.

260 Frankland, 'No. 9 Military Chart'.

261 Lyndall Ryan, 'The Black Line in Van Diemen's Land: Success or Failure?', *Journal of Australian Studies* 37, no. 1 (2013): 3–18.

262 Eleanor Cave, '"Journal during the Expedition against the Blacks": Robert Lawrence's Experience on the Black Line', *Journal of Australian Studies* 37, no. 1 (2013): 34–47; Chapter 5 in Clements, *Black War: Fear, Sex and Resistance in Tasmania*, 125–56.

Figure 25: Field Plan of Movements of the Military, 1831 (Frankland).

Although conflict made certain requirements from the Survey Office, it also had a detrimental impact on the surveyors attempting to work in the field. Throughout colonial history there are examples of surveyors operating as the front-line soldiers in the push out across the land. Byrnes talks about the passive resistance of the Maori towards the land survey teams, removing pegs and destroying empty huts.[263] In Van Diemen's Land the records show remarkably little confrontation between the the surveyors and Tasmanian Aborigines, but that does not mean none occurred. In February 1804, Meehan reported that he and his party had been surrounded by a group of Aboriginal people. Initially the Europeans did not feel threatened, but when one of the men removed a surveying peg he 'felt obliged to fire on them'.[264] Shortly after this incident came the Risdon Cove massacre discussed earlier in this chapter. J.H. Wedge recorded an incident in 1828 when his party appear to have thwarted an attack by about sixteen men 'armed with spears'. On other occasions he reported conflict in the surrounding area, usually on a local property. His journals do, however, reveal the surveyor's reliance on local knowledge. Within the space of a week, Wedge collected several women who flagged his team down – 'the [Aboriginal] men did not appear to be in the least averse to the women joining us' – and took advantage of their knowledge of the area. They caught an 'oppossum' for the dogs, pointed out fresh water sources, guided several of the men around a sandbar, and then Wedge found himself sheltering with the women and the team in his

263 Byrnes, *Boundary Markers: Land Surveying and the Colonisation of New Zealand*, 108–9.
264 James Meehan's field notebook, TAHO as cited in Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11', 48–49.

men's tent after a storm destroyed his own tent. The women travelled with the team for two weeks, before absconding with some of the dogs and provisions, never to be seen again.[265] Such interactions demonstrate the two-way nature of interactions on the frontier. Such relationships were often transactional, based on gaining what the other had to offer.

Conclusion

The British settlement of Van Diemen's Land was at first restricted to small areas. For the historian this has benefits and drawbacks. It means small, contained areas that can be easily managed, but it also means fewer records and therefore less data. This detailed examination of the different eras of the Van Diemen's Land Survey Office shows that while the work of the colonial surveyors was flawed, rarely were the causes responsible for the errors repeated.

Initial optimism filled Meehan's chart, as he competently explored the banks of the Derwent River. Fertile soil and fresh water would lead to an abundant and self-sufficient colony. Harris sought the same assurances as he travelled further into the unknown surrounds of Hobart Town, although much of his work has been overshadowed (and lost) and he was accused of being negligent and ignorant.

His successors had experience and bureaucratic respect, but were overwhelmed by the sheer size of the job before them. The surveyors had the task of implementing new settlement patterns to satisfy the ambitions of the growing numbers of wealthy free settlers, who were unencumbered by a convict past. By the 1820s large grants were the norm, but Van Diemen's Land appeared to be filling up. The Survey Office found itself answerable to a new hierarchy, and was accosted by surly settlers who were upset by the shenanigans of former years and anxious to compete for the dwindling supply of accessible acres.

By the late 1820s there were fewer remaining excuses for inaccurate surveys. And yet they continued, despite extra staffing and improved equipment, with inaccurate boundaries and measurements preserved for years to come. Frankland's office was far more capable of timely, reliable and accurate work than Meehan's or Harris', but it was still hindered by problems of the real world and shifting priorities. It is worth remembering that a map is

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[265] 1 May 1828; 17 May 1830; 31 January - 6 February 1828; 20 February 1828 John Helder Wedge, *The Diaries of John Helder Wedge, 1824–1835*, ed. W. F. Ellis (Hobart: Royal Society of Tasmania, 1962), 48; 62; 42-3; 43.

merely a fictional account of the world we see, a story that fossilises the challenges of its creation. In Van Diemen's Land this meant decades spent battling against nature, bureaucracy, and greed, the traces of which can still be seen today.

By contextualising the work of the surveyors within the larger story of settlement in Van Diemen's Land several recurring hindrances and themes have become apparent. They include:

- a lack of training and resources (including paper and equipment);
- an understaffed and underpaid Survey Office;
- unclear instructions with room for generous interpretation by the surveyors;
- shifting colonial hierarchies;
- surveyor duties that took them out of the field; and
- landholder enthusiasm to make immediate use of their land.

The following chapters will test the weight of these issues using HGIS, asking how they affected both the surviving paper record, and the physical layout of the landscape that remains today.

Chapter Four:
Long-Lot

Our connection to waterways is almost as old as civilisation itself, with settler-agrarian societies forming along river edges and ocean shores across the world. Their importance today competes with land and air routes, but nonetheless, global trade is still heavily reliant on water communication. To the colonial explorer the ocean was a highway, while rivers formed the inland roads. Therefore it was not unusual for rivers to form the core of new settlements. But this assumption was not restricted to the British colonies. Patterns of landholdings stretching from the river's edge can be found throughout the world. They were, however, not restricted to riverine land – they were focussed on routes of transportation, whether that was water- or land-based. They are a distinctive feature in places as diverse as the Outer Hebrides, Brazil, medieval Germany and nineteenth century Texas. Not surprisingly they are known by a number of different names: 'long-lot', 'ribbon', or 'stripwise' farming by English-speaking historians; the 'Seigneurial System' in French Canada; 'Waldhufendorf' and 'Marschhufendorf' (forest and marsh 'farmlet-villages') in German. Categories can, however, be misleading. As James C. Hamlett outlined when looking at the development of long-lots in Washington County in Tennessee, this pattern could stem from German or French influence, or topographical organisation.[266]

For British settler colonies from the mid-eighteenth century, long-lot patterns were laid down according to a set of instructions sent from the Colonial Office.[267] These instructions set out three requirements of each grant given within a new settlement – shape, soil and accessibility. This chapter works through each of these requirements, analysing how they were implemented in practice. It argues that not only was the long-lot best suited to the needs of the earliest land grantees, but that it also operated as a surveillance mechanism to maintain control over the emancipist landholders. The chapter also argues that the emancipist landholders had completely different motivations and objectives from those of the later free settlers, a discussion that is continued through the following chapters.

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[266] James C. Hamlett, 'Long-Lots in Washington County, Tennessee', *Southeastern Geographer* 3 (1963): 34; Terry G. Jordan, 'Antecedents of the Long-Lot in Texas', *Material Culture* 37, no. 1 (2005): 18; C.P. Barnes, 'Economies of the Long-Lot Farm', *Geographical Review* 25, no. 2 (1935): 298–301; Roger J.P. Kain, 'The Role of Cadastral Surveys and Maps in Land Settlement from England', *Landscape Research* 27, no. 1 (2002): 11–24; Brian Leigh Dunnigan, 'Chapter 1: Charting the Shape of Early Detroit: 1701–1838', in *Mapping Detroit: Land, Community, and Shaping a City*, ed. June Manning Thomas (Detroit: Wayne State University Press, 2015), 17–25; Jacques Mathieu and Maude-Emmanuelle Lambert, 'Seigneurial System', *The Canadian Encyclopedia*, 4 March 2015, http://www.thecanadianencyclopedia.ca; Gordon Young, 'Early German Settlements in South Australia', *Australian Historical Archaeology* 3 (1985): 43–55.

[267] Phillip's Instructions re Land Grants, 22 August 1789 HRA I (i), 126.

Within the context of this study, the name 'long-lot' is used as a blanket phrase, covering all forms of landholdings that are at least three times the depth to width and within a pattern of similarly proportioned plots. This covers both the riverine intensive and intermediate free patterns found in Van Diemen's Land. The chapter begins with an examination of the long-lot form, as used around the world, before moving into a discussion on the specifics of the Van Diemonian colony.

'One-third of the length'

In his 1837 report to Lieutenant-Governor John Franklin, the Surveyor-General George Frankland described the general layout of the settlements, with the chief concern 'from the commencement of the Colony' being to give 'as extensive accommodation as possible' along river edges. These lands, he explained, were covered with 'undulating grassy lands, lightly timbered, with here and there a valuable marsh'.[268] Not only was the river valuable, but the riparian land was also apparently well suited to agriculture. The settlements he described had been initially formed according to the instructions Governor Phillip brought with him to the Australian continent.

> It is also Our Will and Pleasure that in all grants of land to be made by You, as aforesaid, regard be had to the profitable and unprofitable acres, so that each grantee may have a proportionable number of one sort and of the other, as likewise the **breadth of each track to be hereafter granted be one-third of the length of such track, and that the length of such track do not extend along the banks of any bay or river, but into the mainland**, that thereby the said grantees may have each a convenient share of what accommodation the said harbour or river may afford for navigation or otherwise.[269]

These '1:3 Instructions' drew on countless examples of British land management practices around the world. They were given to settler colonies, where the emphasis lay in establishing a British presence on the land itself (as opposed to creating a trade hub, as is seen in British India for example). The instructions also regulated how much land different groups of people could receive: single male convicts would receive thirty acres, fifty if they were married, and an extra ten for every child they had when the grant was made. Exactly how the Colonial Office came to decide on the thirty-acre base-size for grants in the

[268] Frankland, *Report on the Transactions of the Survey Department*, 6–7.
[269] Emphasis added. Phillip's Instructions re Land Grants, 22 August 1789 HRA I (i), 126. For another example see Atkinson, *Camden*, 11.

colonies is unknown, but in the American colony Georgia half a century earlier, fifty acres were considered sufficient to support a soldier and his family.[270] Amendments were sent later, granting non-commissioned officers 100 acres, and free men fifty acres above the amount granted to a convict with the same number of dependents (figure 26).[271]

Governor Phillip's Instructions (HRA I(i), p. 14)	…to any of the said convicts so emancipated… To every male shall be granted 30 acres of land, and in case he shall be married, 20 acres more; and for every child who may be with them at the settlement at the time of making the said grant, a further quantity of 10 acres...		
Grenville to Phillip, 22 August 1789 (HRA I(i), p. 125)	To every non-commission officer one hundred acres, and to every private man fifty acres, over and above the quantity directed by Our General Instructions to You to be granted to such convicts as may hereafter be emancipated or discharged from their servitude...		
	Convicts	Non-Commission Officer	Private Man
Single	30	130	180
Married	50	150?	200?
Extra per child present (on top of other allowance)	10	110?	160?

Figure 26: Scale of acres available for granting in 1789 (HRA).
Note the instructions are unclear on whether family members are entitled to the additional acres as well.

The exact origins of these instructions are unknown, but for the British they replicated an ancient pattern found in the hillier regions of England, the 'river and wold' system. Alan Everitt used this term in 1977 to describe a general historic land-use pattern that dates back to Roman occupation, if not before. It is a system built on common sense. River and wold settlements established their cultivated land on the river edges, where the soil was fertile, with grazing spreading up the hills across the thinner soils. Cattle and sheep are capable of grazing on scrubby land, while crops require more precise conditions – without artificial fertilisers it was particularly important to locate them on rich soils.[272]

The widespread use of long-lot layouts around the world, however, suggests they provided an efficient and functional form of land division applicable not only to hilly country.

[270] Ralph Gray and Betty Wood, 'The Transition from Indentured to Involuntary Servitude in Colonial Georgia', *Explorations in Economic History* 13, no. 4 (1976): 353.
[271] Phillip's Instructions re Land Grants, 22 August 1789 HRA I (i), 14; 125.
[272] Alan Everitt, 'Country, County and Town: Patterns of Regional Evolution in England', *Transactions of the Royal Historical Society* 29 (1979): 79–108; Tom Williamson, *Environment, Society and Landscape in Early Medieval England* (Woodbridge: Boydell Press, 2013), 55–60.

Historians have traced them back to French and Germanic origins – Jordan connected Flemish emigration with Marschhufendorf patterns appearing in the English Fens.[273] The pattern has been adopted in so many different contexts that it no longer needs to be connected back to medieval origins. Instead it is more useful to conduct a comparison of different uses to gauge local and governmental priorities.

Figure 27: Original long-lot boundaries (LDC) preserved in the modern landscape at Norfolk Plains (LISTmap).

Similar patterns of land alienation had been followed in the American colonies from the middle of the eighteenth century. The Australian version differed only in the inclusion of the words 'or river'. Many of the lands granted under these guidelines in Van Diemen's Land still display long-lot boundaries (figure 27). The instructions are so specific as to create a distinct appearance, one that can be identified quickly and can be used to date colonial settlement patterns. Variations of this pattern appeared in British settler colonies, as common considerations drove the choices made when settlers laid out their lands in a variety of locations. For example, in Concord (Massachusetts), the first division of land followed a nuclear village pattern, common in parts of England. Brian Donahue attributes

[273] Jordan also brings the long-lot to Texas from France, via Spain 'Antecedents of the Long-Lot in Texas', 29.

their use of this layout, with the houses centred around a common or church, surrounded by their farm lands, partly to a need for security.[274]

In an unfamiliar land, populated by strange animals and Indigenous peoples, the need for neighbours to be near is understandable. Even in Concord, a nucleated village, the settlers gathered along the river edges, with houselots set out in strips stretching back from the waterway. This village mirrored the English tradition of positioning residential lots close to the commons (which also formed the roads, see figure 28), but here water replaced dirt pathways.[275] In the same settlement, the farm lands were first divided into different uses. The fields were located behind the houselots, and some followed a British strip-wise pattern which enabled the sharing of equipment and labour.

Figure 28: Traditional English village layout, clustered around the commons and roads (Faden).

The key feature of long-lot farming was a division of river-edge (or sometimes roadside) lands into thin strips stretching back. Terry G. Jordan noted that houses on a traditional long-lot are at the river-end, 'forming a semi-dispersed row of houses facing the local transport artery.'[276] In Quebec they were usually between forty and one hundred acres, while in Adelaide the German immigrants were granted three-acre blocks.[277] A significant difference between the plots found in Van Diemen's Land and those created under French or German influence is seen in their length (figure 29).[278] Seigneurial and Waldhufendorf plots have generally been observed as significantly narrower than their riparian counterparts granted in Van Diemen's Land (and other colonies following the 1:3 Instructions).[279] Richard Colebrook Harris calculated that the average Seigneurial ratio was 1:10, a large difference from the 1:3 ratio instructed in British colonies, while Jordan

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274 Donahue, *The Great Meadow*, 78.

275 William Faden and Andrew McNair, *Faden's Map of Norfolk*, 1797, 1797.

276 Richard Colebrook Harris, *The Seigneurial System in Early Canada: A Geographical Study* (McGill-Queen's Press - MQUP, 1984), 119; Jordan, 'Antecedents of the Long-Lot in Texas', 18–19.

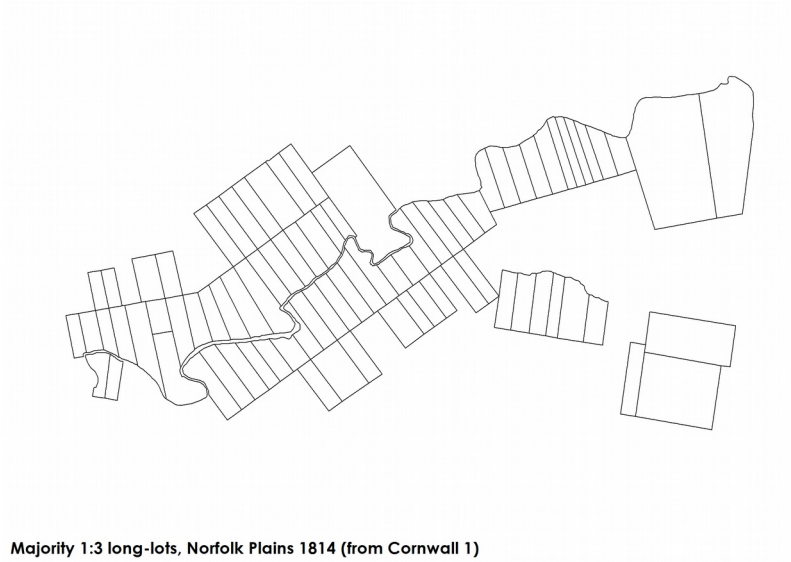
277 Mathieu and Lambert, 'Seigneurial System'; Young, 'Early German Settlements in South Australia', 45.

278 Meehan and Evans, 'Cornwall and Westmorland 1', 1; Glenn T. Trewartha, 'Types of Rural Settlement in Colonial America', *Geographical Review* 36, no. 4 (October 1946): 571.

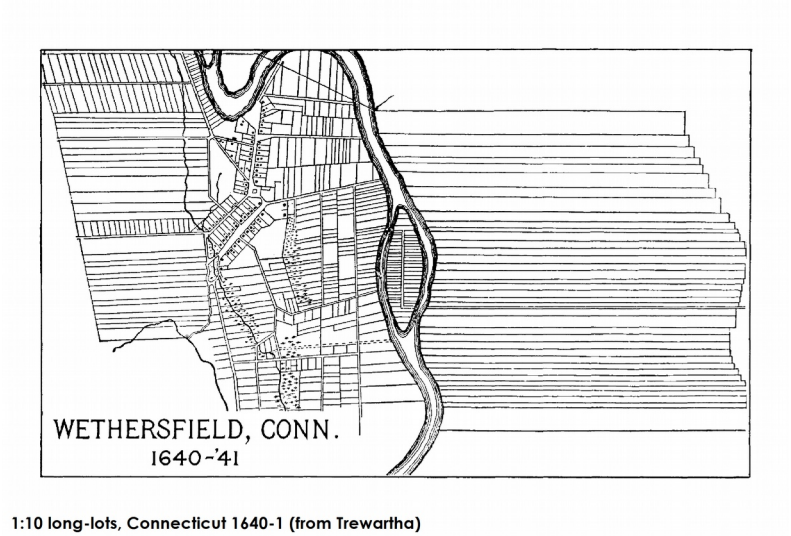
279 For example, see Jordan, 'Antecedents of the Long-Lot in Texas', 18; Kain, 'The Role of Cadastral Surveys and Maps in Land Settlement from England'; Dunnigan, 'Chapter 1: Charting the Shape of Early Detroit: 1701–1838'; Young, 'Early German Settlements in South Australia'; Trewartha, 'Types of Rural Settlement in Colonial America'.

classed a long-lot as 'at least three times as deep as wide' but found most Texan examples were far longer than this. Young suggests that the narrow width enables houses to be visible to each other, providing a form of community protection to the settlement.[280]

In Van Diemen's Land long-lots were designed to provide colonial oversight, particularly over grants made to former convicts and their children. They were restricted in scale and restricted by policy to a 1:3 ratio. This ensured they remained tethered to the waterfront, the primary transportation route, and therefore within the reach of the colonial government. Naturally, these controls were easy to circumvent, and the result was the extensive use of the surrounding Crown land for overflow grazing, a use severely curtailed by later settlement expansion. A second crucial distinction between long-lots formed under the Instructions and those created more organically, such as the English strip-wise pattern, is in their use. Strip-farms in England were monocultural, with each strip holding a particular crop for that season, while 1:3 long-lots were intended to be polycultural, broken into a number of different fields. On each grant the landholders were expected to provide for themselves, growing wheat, beans, barley, and potatoes while



Majority 1:3 long-lots, Norfolk Plains 1814 (from Cornwall 1)



1:10 long-lots, Connecticut 1640-1 (from Trewartha)

Figure 29: 1:3 long-lots (New Norfolk) and 1:10 long-lots (Connecticut)

[280] Young, 'Early German Settlements in South Australia', 45–46.

also raising livestock and building a dwelling.[281] While one of these settlements may have appeared quite similar in broad details – dwellings gathered along the rivers/roads, surrounded by farm land – this adoption of self-contained properties marked a significant break from historic land-use patterns.

Although based on a long-established pattern, long-lots in Van Diemen's Land were part of a new generation of colonial land granting, one that came from written instruction rather than tradition or convenience. In the first form of these instructions the Governor of Virginia was instructed in 1710 to ensure the 'breadth of the tract…bear at least one third part of the length…' It should come as no surprise that Virginia was among the first colonies to receive these formal directions. Differences between New England colonies and those south of Pennsylvania have been summarised as community-focussed as opposed to individual-focussed.[282] In New England the colonies were established with a sense of social equality and an intent to retain the community brought out from England. While spreading land uses across the different soils ensured equal access to resources, this was not always a prime consideration. The early Virginian emphasis on the production of tobacco and other cash crops, and the 'colonial authorities' lack of concern for ensuring orderly and equal access to resources…' encouraged a different form of settlement before the introduction of these instructions.[283] These instructions were given along with directions about surveying and recording land grants, and revocation of grants improperly given or used. This Act has all the hallmarks of attempting to tidy up a rogue system, by removing some of the requirement of resources and connections to succeed in the colony. By the 1750s the 'at least' was removed from these instructions, and the proportions had become absolute.[284] By sending out the same instructions to expanding and new colonies, the Colonial Office removed the risk of Virginian inequality developing. The Office was also ensuring uniformity across colonies – their interest lay in stamping 'British Territory' on as many lands, and not in the distinctions between those lands.

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281 For example, see the 1819 Muster which recorded the acres of each crop. A figure illustrating this can be seen in Chapter Seven.

282 Kain, 'The Role of Cadastral Surveys and Maps in Land Settlement from England', 12; Trewartha, 'Types of Rural Settlement in Colonial America', 574.

283 Kain, 'The Role of Cadastral Surveys and Maps in Land Settlement from England', 13.

284 'Chapter III', in *The Statutes at Large: Being a Collection of All the Laws of Virginia, from the First Session of the Legislature, in the Year 1619*, 1820, 38; Starting with Georgia in 1754 and Nova Scotia in 1756 Leonard Woods: Leonard Woods Labaree, ed., *Royal Instructions to British Colonial Governors, 1670–1776*, vol. II (New York: The American Historical Association: Octagon Books, Inc, 1967), 531–32.

As a result of the agricultural and industrial revolutions there was a massive expansion of estates in England in the eighteenth and nineteenth centuries, as commons underwent a final stage of enclosure. This is seen on the Norfolk estate of Wolterton, which expanded from an average farm size of 56 acres, to 236 acres between 1732 and 1819. Even more extreme was Hunstanton on the north coast of Norfolk, where farms increased from an average of 17 acres to 223 between 1689 and 1819. Wade-Martins and Williamson measured farms up to 1,000 acres in parts of Norfolk, and found properties of over 200 acres were common by the early nineteenth-century.[285] Farming practices of Norfolk were influential around Britain, with its eponymous four-course crop rotation system adopted by a number of other regions throughout the eighteenth century. In 1771, agricultural reformer Arthur Young praised a Dorset gentleman for 'fixing a sensible Norfolk farmer' on his estate, and encouraged East Anglian readers to scoff with him at the primitive nature of Midlands systems.[286] This British focus on establishing ordered, polycultural farms in its colonies was an extension of these new principles, but in reality their use reflected much older, pre-enclosure practices. Colonial instructions could never be tidily transposed directly onto the landscape.

With this understanding of the global history of the long-lot, it is possible and instructive to compare settlements closer to Van Diemen's Land. New South Wales and Van Diemen's Land were established under the same principles, and an examination of land alienation patterns in New South Wales informs this discussion. It is worth remembering that the New South Wales settlements preceded Van Diemen's Land by fifteen years, enough time for experiments to fail and then succeed, before being attempted in the southern-most colony. Grace Karskens observes that Governor Arthur Philip was the only governor to 'actually stick to his Instructions', carefully measuring out plots, and ruling out the Hawkesbury as a site for settlement.[287] The settlers in the Hawkesbury, initially almost all emancipists, were brutally reliant on the rivers – their only connection to the Sydney settlement was also the conduit for merciless floods that could eradicate their farms, while simultaneously fertilising the fields.[288] The issue of water access would drive the earliest

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285 Williamson, *The Transformation of Rural England*, 57.

286 Arthur Young, *The Farmer's Tour through the East of England: Being the Register of a Journey through Various Counties of This Kingdom, to Enquire into the State of Agriculture* (Printed for W. Strahan, 1771), xlii, 48.

287 Karskens, *The Colony*, 118.

288 Karskens, 117–33.

settlement patterns, but the differences in water availability would also distinguish New South Wales from Van Diemen's Land in the long term.

Governor Hunter's chart of the New South Wales grants, including those at the Hawkesbury shows a number of long-lots stretching back from the Hawkesbury (figure 30).[289] Alan Atkinson, however, notes the ease with which this system could be rorted by wily settlers, using the example of John Macarthur in Camden. In 1805 Macarthur was granted 5000 acres for a trial of sheep breeding, while his friend Walter Davidson received 2000 acres. Davidson's plot was sandwiched between two halves of Macarthur's, forming what Atkinson calls 'a fine piece of geometrical jobbery'. Davidson returned to Britain, and allowed Macarthur to use his grant, giving him access to twelve kilometres of river frontage.[290] Atkinson's map shows that one of Macarthur's grants was nearly square, as it sat on a ninety degree river bend.[291] There are a number of factors that could have allowed this – lax surveying, corruption, degradation of adherence to the rules over time, to name a few. Nonetheless, the entire settlement of Camden demonstrates a diminishing use of the 1:3 Instructions.

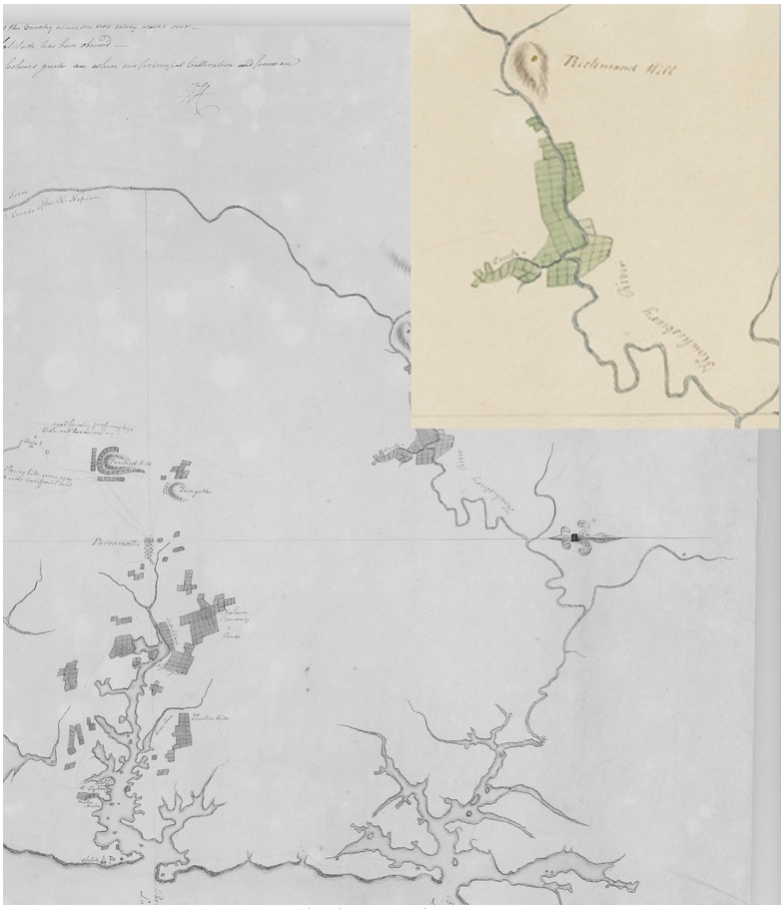

Figure 30: Hawkesbury settlement, 1796 (Hunter).

In his thesis on surveying colonial Australia, James Drown suggests that approaches to land quickly diverged between New South Wales and Van Diemen's Land, largely due to water access. In the early 1820s, New South Wales formally adopted a rectilinear system,

289 John Hunter, *New South Wales Sketch of the Settlements 20th August 1796*, 20 August 1796, 20 August 1796, Cb 79/7, State Library of NSW.
290 Atkinson, *Camden*, 10–11.
291 Atkinson, 3.Atkinson, 3.

under the instructions of Macquarie and later Brisbane. Evans rejected the use of a rectilinear pattern in Van Diemen's Land largely because of 'the general want of Water experienced in the Interior in the Summer Months'. He also cited the hilly nature of the island as restricting their ability to apply a regular boundary system to it. Instead, the settlers continued to follow the rivers, finding suitable lands along their edges.[292]

Macquarie and Brisbane's instructions regarding this rectilinear layout reveal an expectation that the surveyors would be on site before the settlers arrived to take possession, laying out the dimensions of the grant. This was quite unrealistic in Van Diemen's Land where ability of the surveyors was hindered by factors outside their control. Chapter Three delves into these reasons, and the effect they had on landscape itself, but circumstances on this island colony forced many government officials to constantly play catch-up. This included the surveyors, as they struggled to measure thousands of acres already under use by impatient settlers.

These earliest grants given under the 1:3 Instructions are 'riverine intensive'. Visually they do not differ from the next stage of land granting, the 'intermediate free' plots, but their creation was based on completely different principles. Riverine intensive plots are those that were granted during the early years of Van Diemen's Land settlement, usually given to convicts, emancipists and soldiers. Intermediate free plots began to dominate the landscape from 1817, when the colony was opened to free settler emigration from Britain, and they represent the arrival of significantly wealthier landholders who would expand out across the bountiful acres they would never have been able to afford in Britain. Both patterns follow the guidelines of the 1:3 Instructions, with the intermediate free significantly larger than the riverine intensive. They are tied to the river edge, with their riparian width one third that of the length.

In evidence given to Bigge, Evans confirmed that emancipists were intentionally grouped together during the riverine intensive stage, so they could provide protection for each other.[293] This was also an effective mechanism for several other purposes. By keeping them together the government retained oversight; although these settlers were former convicts who had served their sentence, the government still wished to keep them under

[292] Drown, 'An Apparatus of Empire', 85–86.
[293] Examination of G.W. Evans, 22 March 1820, HRA III (iii), 319.

supervision.[294] By limiting their capability to physically expand their properties, the government also ensured the emancipists were discouraged from social mobility. Although it was more obvious in this riverine intensive stage, the reality was that the colonial government never ceased attempting to surveil landholders. The means employed simply became less overt to allow free settlers a (false) sense of autonomy. Riverine intensive grants were also particularly useful in the infant years of a colony which was reliant on supplies from Britain. By ensuring everyone had equal access to cultivable land (by dividing soils and water access evenly), the government was enabling everyone to fulfil the requirement of feeding produce back into the government stores. Angus McGillivery has argued that settlements in these earliest years were intended to be self-supporting and to provide provisions to restock passing ships, rather than relying on the supplies they brought. By locating everyone close together, resources and labour could be pooled to assist in this aim (although he was discussing New South Wales, the same can be applied to Van Diemen's Land).[295]

Figure 31: Detail of Stainforth's Cove, Derwent River, 1804 (Meehan, Monmouth 0).

Some of the earliest land grants in Van Diemen's Land were made at Stainforth's Cove, now New Town Bay, a short distance north of Sullivan's Cove (Hobart) up the Derwent River. Each grant was 100 acres, and they were all given to free settlers. Another set of

294 Although the Hawkesbury-Nepean settlement was set out in a riverine intensive pattern, its distance from the central authority in Sydney Cove may be seen as an act of resistance, the emancipists placing themselves out of sight of the government. Karskens, *The Colony*, 120.

295 McGillivery, 'Convict Settlers, Seamen's Greens, and Imperial Designs at Port Jackson'.

plots was laid out for emancipists, south of the Hobart camp. Meehan's 1804 chart of the Derwent River has the Stainforth's Cove grants clearly marked, laid out in a long-lot style along both sides of New Town Rivulet (figure 31).[296] They are near a note declaring that 'There is a quantity of flat ground here moderately good'. The requirements for a settlement were not onerous – the initial settlers sought out good soils, water access, and relatively flat lands.

The initial instructions about land grants, given to Lieutenant John Bowen for application at the Risdon Cove settlement, were very different from the 1:3 Instructions. The first five settlers were each granted five acres, and a further 100 when 'Circumstances will allow' it. Bowen was permitted to allocate 'small portions' of land for particular purposes, but the authority to promise land was expressly withheld.[297] Long-lots were formally introduced to the Van Diemen's Land settlement with the arrival of Lieutenant-Governor David Collins, who brought with him Phillip's instructions, which had by this stage been passed between a number of government officials.[298] The Stainforth's Cove plots were among the first in Van Diemen's Land to be set out as long-lots, and as the first settlement 'outside' Sullivan's Cove, it was accessible only by the river.[299] Even thirteen years later, after a road was made, the three mile walk to the New Town settlement was described as 'lonely'.[300]

Several maps survive from 1814, showing different settlements based in either Hobart Town or Launceston. They were made under Governor Macquarie's orders, in response to the apparent poor quality of maps made to that point. This means that some, such as New Norfolk and Norfolk Plains, record the settlement several years after it was established. Nonetheless, they show the preferred patterns of the earliest years of the colony. For example both *Monmouth 4* (showing New Norfolk) and *Cornwall 1* (Norfolk Plains) show settlements laid out in a riverine intensive pattern (figure 32).

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296 Meehan, 'Monmouth 0'.

297 Memorandum of instructions for J. Bowen, 10 June 1803, HRA III (i), 194.

298 These instructions had been given to Collins for the unsuccessful Port Phillip settlement, from which he had come to the Derwent River settlement. Hobart to Collins, 7 February 1803, 9; Hobart to King, 25 February 1802, HRA I (iii), 394–95; Grenville to Hobart, 22 August 1789, HRA I (i), 124–28.

299 Bowen, *Historic Plan: Copy of Sketch by Lieutenant Bowen Forwarded to Governor King in a Despatch Dated 17/9/1803 'Showing Original Settlement Then Known as Hobart Situated at Risdon Cove'*, 1803, 1803, AF395/1/48, TAHO, http://stors.tas.gov.au/AF395-1-48.

300 Charles Rowcroft wrote a sensationalist narrative based on his experiences when he first arrived in the colony. *Tales of the Colonies; Or, The Adventures of an Emigrant* (Smith, Elder, 1845), 17.

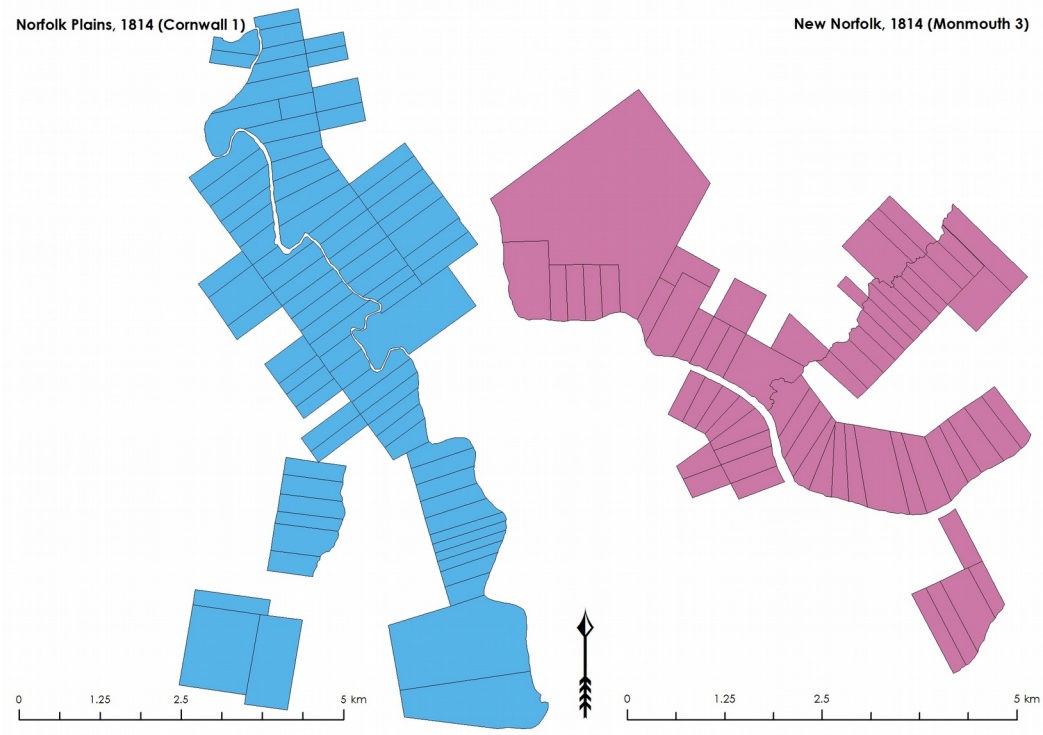

Figure 32: Riverine intensive in Norfolk Plains (left) and New Norfolk (right) in 1814.

Lining the Derwent River and Back River at New Norfolk, and the South Esk and Macquarie Rivers at Longford, the blocks are tightly and neatly measured out in their long strips. Little heed was paid to the terrain, with a straight line forming the back boundary across entire rows. Even where the long-lots have been combined to form larger acreages, their boundaries can often be found fossilised in roads. Long-lot grants usually pre-dated roads as they represented the first European movement into an area, and there are reports of landowners changing road routes to circumvent their own boundaries.[301] Therefore many of the minor roads and tracks in areas opened for settlement during the long-lot period follow the old grant boundaries, and are visible today (figure 33). Allowance for river bends and kinks was made by adjusting the width of each block, which varied to ensure (at least theoretically) consistent acreage. By sacrificing function on land for appearance on paper, the Colonial Office established a precedent that would haunt the Survey Office for years to come.

The locations shown in these 1814 maps demonstrate a textbook riverine intensive layout. Reflecting the perpetual importance of waterways the long-lot pattern was followed throughout the colonial period, although it rapidly transitioned to an intermediate free pattern. While visually this pattern was still based on a 1:3 ratio, the philosophy behind it

[301] Frankland, *Report on the Transactions of the Survey Department*, 22.

was significantly different. It was still based on the waterways, lining up along river edges to ensure access to all the advantages it conferred, but often stood apart from other grants, enabling access to the surrounding Crown land. These landholders were typically free emigrants able to choose their own land, rather than being commanded by governmental instruction and the potential for expansion was starting to take priority over the community provided by a tight riverine intensive layout. But the settlers moving into these more isolated intermediate free grants would discover they had lost more than neighbours to share equipment with, help was also a lot further away.

Figure 33: Roads on a satellite view (LISTmap) follow early boundaries, black lines, in New Norfolk. They do not line up precisely, due to the spatial inaccuracies in the historic charts.

Grants given under the long-lot system were calculated according to status, and therefore reflected the same to the wider world. Such a system must inevitably be subjected to upward pressure, with each settler making a case for a larger acreage than their neighbour. Large inland areas were 'opened' for settlement, and by the mid-1820s several of the sheep farming dynasties that continue today were established. And yet, these emigrants were still choosing acreages that followed a 1:3 ratio, along the edges of rivers. It was well-tested in a number of different colonial settings, and river access was advantageous to more than just the earliest settlers in an area. It is clear that the access that waterways provided to the interior, as well as the transportation routes they formed, were necessary beyond the first

years of a settlement, but they were not the only factors. Riparian land was attractive because of its soils and the industrial uses that a reliable water supply could enable.

Figure 34: A typical landscape in Van Diemen's Land, Hobart, 1822 (Unknown).

Although they would significantly alter the landscape over the coming years, the British preferred certain lands for their initial settlements. As discussed in Chapter Three the earliest exploration charts demonstrate their preference for flat, riverine soils. Their immediate concern was to quickly ensure that these settlements were self-sufficient with basic food stuffs, and these lands provided the best chance for that. To the horror of visitors to the island, the first twenty years of agriculture featured roughly cleared lands, with only minimal effort used to build farms.[302] The landscape of early European settlement in Van Diemen's Land was a long way from the model farms of Britain. Figures 34 and 35 show an idyllic British landscape and a typical Van Diemonian scene.[303] Both are framed with trees and look at the hills in the distance, but the difference between the order of the former and the disorder of the latter is noticeable. The settlers gravitated towards lands that were suitable for their farming, but they still needed to be shaped to fit European ideals. The visitors who complained about the lack of 'improvement' were oblivious to the

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302 Breton, *Excursions in NSW, WA and VDL*, 1834, 314; Bigge, *Report on Agriculture and Trade in N.S.W*, 27.

303 *Hobart Town, 6th May 1822*, 1822, 1822, National Library of Australia, http://nla.gov.au/nla.obj-139503736; Francis Towne, *Haldon Hall, near Exeter*, 1780, 1780, T01155, Tate, http://www.tate.org.uk/art/artworks/towne-haldon-hall-near-exeter-t01155.

impact of the settlers on the landscape, which was almost immediate as they planted exotic flora and introduced non-indigenous animals, while tweaking the land to better suit their needs.

Figure 35: An ideal English landscape at Haldon Hall, Devon, 1780 (Towne).

'Profitable and Unprofitable Acres'

> It is also Our Will and Pleasure that in all grants of land to be made by You, as aforesaid, regard be had to the **profitable and unprofitable acres, so that each grantee may have a proportionable number of one sort and of the other**, as likewise the breadth of each track to be hereafter granted be one-third of the length of such track, and that the length of such track do not extend along the banks of any bay or river, but into the mainland, that thereby the said grantees may have each a convenient share of what accommodation the said harbour or river may afford for navigation or otherwise.[304]

The 1:3 Instructions not only focussed on river access, they also attempted to provide every grantee with the opportunity to thrive, by providing equal access to both the high and poor quality soils. Tasmania has an extraordinary range of microclimates. While the Tasmanian Aborigines understood the nuances of the climate and topography, with the wet west coast or the dry midlands, for example, this was knowledge the Europeans had to acquire.

[304] Emphasis added. Phillip's Instructions re Land Grants, 22 August 1789, HRA I (i), 126.

Despite soils being largely determined by circumstances including elevation, proximity to water, and underlying geology, there remains great variation even along a river edge. Two soils were favoured by the earliest settlements in Van Diemen's Land – Brown Kurosol and Brown Chromosol. Today the primary uses for these soils are natural and dry (modified) grazing, and they are not considered to be primary soils for cropping in Tasmania.[305] The area around Back River, where the New Norfolk settlement would first be laid out, was described by Meehan in 1804.[306] This area was chosen to resettle the occupants of the failing Norfolk Island settlement. It took several years to be enacted, but the sites of New Norfolk and Norfolk Plains were found to be suitable for new settlement. Many of the evacuees were sent to establish settlements in those, and several other locations around the island (including Sorell, Evandale and Sandy Bay).[307] The evacuees came to Van Diemen's Land from an island of characterised by such fertile volcanic soils that the settlers were reported to be given 'abundance without labour'. While only given ten to thirty acres of land, the Norfolk Island plots were much more productive than the larger compensatory grants they received in Van Diemen's Land.[308] The Norfolk Islanders expressed much dissatisfaction about their changed circumstances, finding the allegedly 'extremely fertile' soils of the Back River to be inferior to their previous allotments.[309]

Monmouth 0, the map drawn of the Derwent River in 1804, contains a number of such comments of the lands Meehan observed, as the surveyor sought out potential settlement locations. It was on the grounds of these comments that sites were chosen for expansion, rather than extensive tests or experimentation. In recommending specific locations, however, the surveyors based their decisions on experience, along with visual and tactile cues, as they evaluated the vegetation and the actual feel of the soils.

Risdon Cove and New Town Bay (the site of the first organised free settler grants) as well as possibly some parts of New Norfolk, all have the same Brown Kurosol soil: Government Hills (264141), a soil today used largely for grazing, or set aside for conservation. On the lower slopes this soil is well suited to agriculture, as a light clay with moderate permeability that allows for drainage and nutrient retention, while the flats can be susceptible to

305 Tasmanian Planning Commission, 'Soil Indicators and Distribution: State of the Environment Tasmania 2009'.
306 Meehan, 'Monmouth 0'.
307 West, *The History of Tasmania*, 26–27.
308 West, 36–37.
309 Report on Settlement, 1810, HRA III (i), 574.

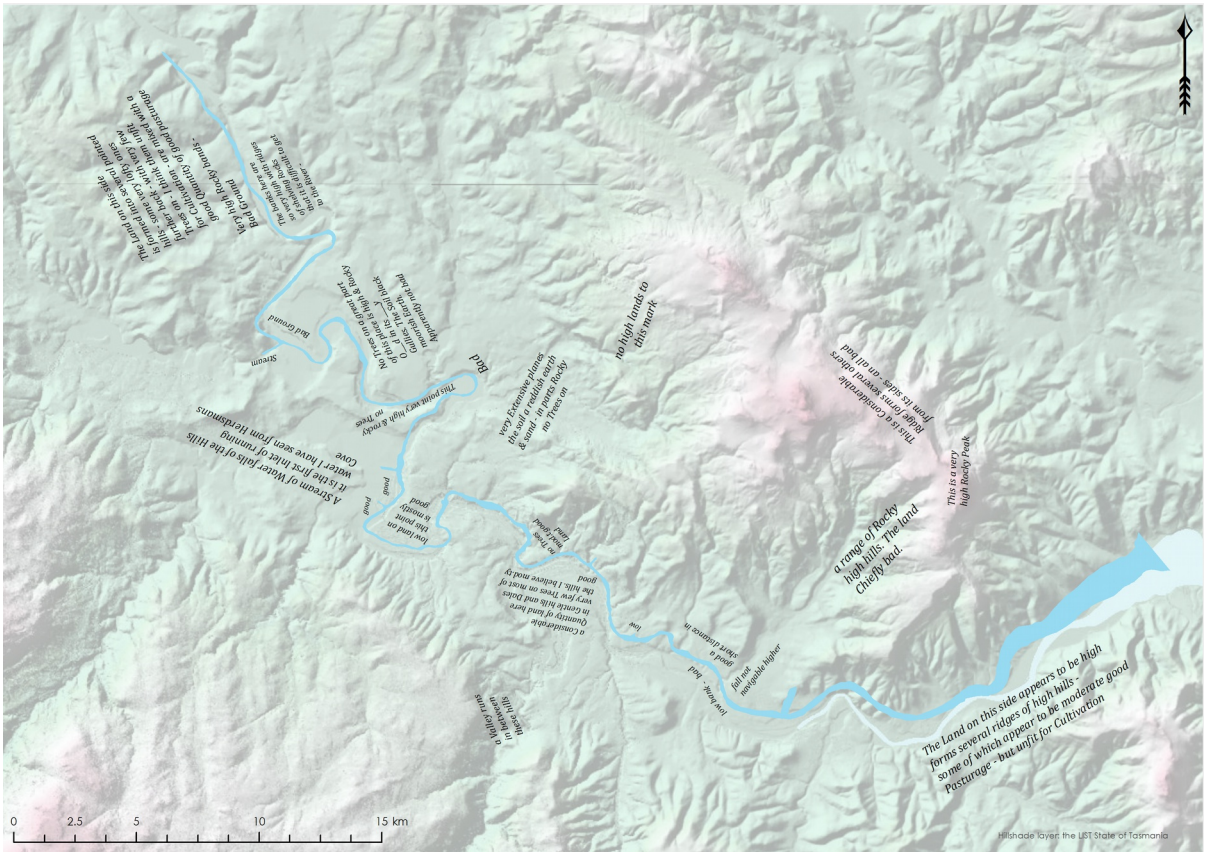

Figure 36: Detail of New Norfolk from Monmouth 0 (1804) on a map showing the hills of the area (LISTmap).

waterlogging and flooding. A map of all the New Norfolk plots granted prior to the arrival of free settlers in the 1820s, however, shows that the majority of the riverine intensive sites here were made of Bushy Park Plains (298122), an alluvial Brown Chromosol that stretches up to Macquarie Plains (figure 37). Although this soil has less area than the Government Hills type, it was more popular in the first years of this settlement, and today many of the floodplains along this stretch are used for hop growing, and have been since the 1820s, while the rest of this land is generally used for cropping and grazing. This soil has a variety of loam mixes at different stages, with moderate permeability, again keeping the danger of waterlogging low (except on the floodplains), while retaining high soil fertility.

The other soil favoured by early New Norfolk grants was the Heathy Hills (273141), in the hills surrounding Back River. As the name suggests, this soil has a hilly profile, but those 1814 grants that do sit on Heathy Hills are on the flat sections, featuring quite sandy soils - loamy sand to sandy clay loam. Only a minority of the 1814 grants are primarily on this soil, but many of the back boundaries stretch to it. This soil may have moderate drainage

on the flats, but it is vulnerable to flooding and waterlogging. The number of grants on the Bushy Park Plains soil testifies to the preferability of it for farming in the early days of the New Norfolk settlements. The grants on Heathy Hills were an inevitable result of expansion – there were too many initial settlers to fit onto the Bushy Park Plains but they still needed to be grouped together for security and control, and therefore spread into the surrounding area.

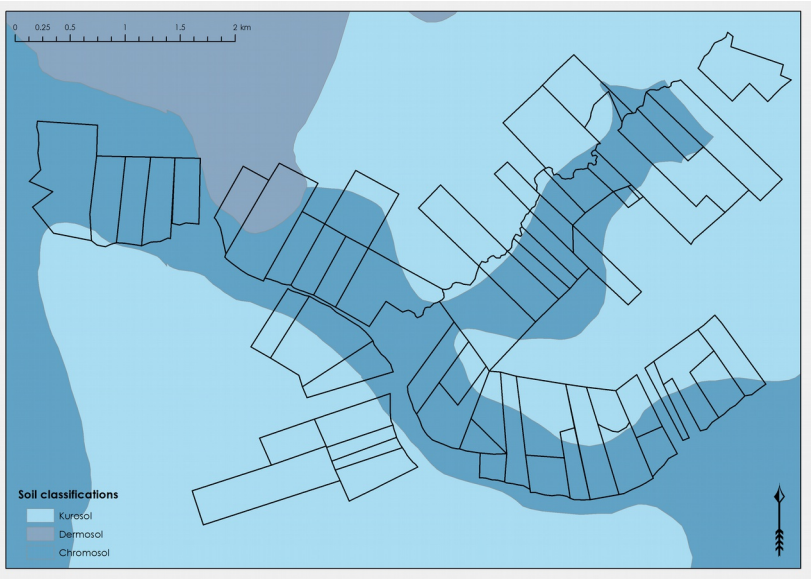

Figure 37: New Norfolk settlement to 1816, on the main soil categories. Note the dominance on Chromosol soils (ASC).

The Grey Kurosol (South Esk River (393121) and Powranna (394121)) around Longford (the riverine intensive Norfolk Plains settlement) is also used today for grazing and cropping. The river terraces have sandy loam and moderate permeability, again permitting adequate water drainage without losing all the nutrients. The floodplains, however, have a low permeability – as their name suggests, this makes them prone to flooding and waterlogging.

These soils have very different textures: sandy loam of Norfolk Plains feels gritty and only just holds together in a ball, while light clay is smooth and adheres into a ball easily.[310] However the colonial farmers chose their lands, it is clear that they made informed decisions, choosing fertile soils that could be worked without complication. While influenced by modern ideas of improvement, Evan's description demonstrates the low-maintenance nature of these early grants:

> … no regular system is followed; and it is surprising that the produce should be so great as has been represented, from land so ill managed, and to which so little attention is paid, sown annually without any change or attempt to fertilize it.[311]

[310] Brown, 'Soil Texture – Measuring in the Field'.
[311] G.W. Evans, *A Geographical, Historical, and Topographical Description of Van Diemen's Land* (John Souter, 1822), 65.

Although the soils in these early settlements are varied, there are several unifying factors that drew the colonists to them. The underlying similarities are obvious when the codes are viewed together (Figure 38).

Name	Rainfall	Geological Period	Rock Type	Altitude	Topography	Other Variables
Government Hills	**2**	6	**4**	1	**4**	1
Heathy Hills	**2**	7	**3**	1	**4**	1
Bushy Park Plains	**2**	9	**8**	1	**2**	2
South Esk River	**3**	9	**3**	1	**2**	1
Powranna	**3**	9	**4**	1	**2**	1

Figure 38: Soils in New Norfolk and Norfolk Plains
(For a full description of the categories, see appendix eight)

As previously explained, each digit represents a different factor that forms the particular soil. By laying out the codes of the riverine intensive, it is apparent that each of these soils is very similar, in every category except the rock type. Government Hills is the most dissimilar, but it is also problematic because of the large area it covers, the urbanisation and changing land use of some parts, and the fact it was not the most popular land in the first large-scale settlement plan at New Norfolk. Likewise, although several grants are located on Heathy Hills, it was only used when the neighbouring Bushy Park Plains had all been granted out. The three soil types most popular among some of the earliest areas opened for grants, however, all have a measured annual rainfall within 500–750mm, with undulating plains between 0 and 300 metres above sea level. These were conditions that suited colonial farming practices.

Intermediate free grants included in this study cover a significantly larger area of land than riverine intensive, both individually and as a whole. The result is that their boundaries cover five times as many soils as riverine intensive. Their codes show large variation in rainfall (from 375–500 mm through to one area with 1500–2000 mm per annum), but this is partly due to the grants stretching back further into the hills, where these conditions can be quite different from the riparian land below. These soils can also be quite far-reaching, beyond the lands alienated by these early settlers who may not have taken in acres in the wettest areas. Nonetheless, the altitude remains predominantly low, with fourteen of the twenty-one soils prevalent between 0 and 300 metres above sea level, while the topography is dominated by undulating plains and low hills.

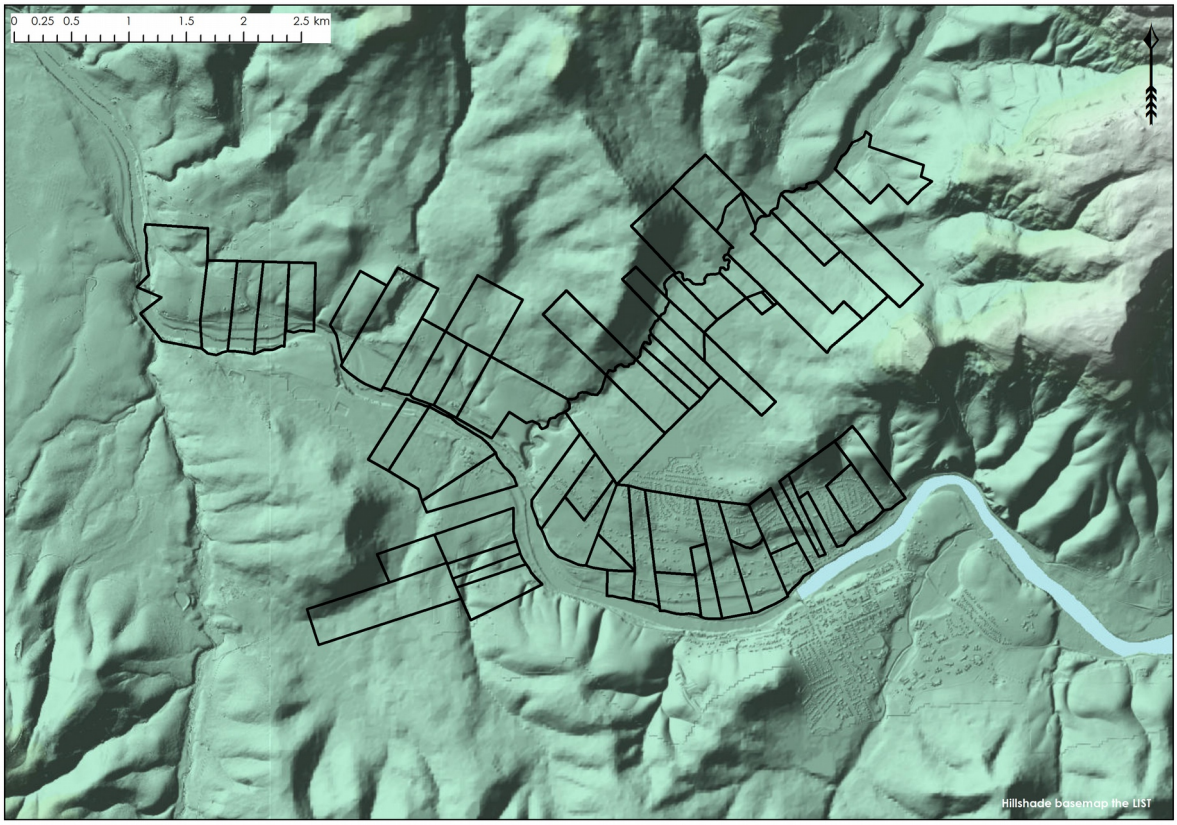

Figure 39: New Norfolk properties (to 1817) on a hillshade layer (LISTmap)

While rivers often stem from springs at higher altitudes, the riverine intensive plots at New Norfolk and Norfolk Plains are all between 50 and 150 metres above sea level, at the bottoms of valleys. From their lived experience of the river and wold systems of the British Isles, the explorers, surveyors and settlers knew that valley floors were better suited to cultivation than the hills. They therefore gravitated to these areas where the land is more fertile, flatter and more accessible. Here the settlers found slower flowing rivers that could be navigated by larger vessels, and less climbing for foot access. Even at slightly higher altitudes, the land chosen for the intermediate free plots is relatively level, as seen at Bothwell and through the Midlands (figure 40).

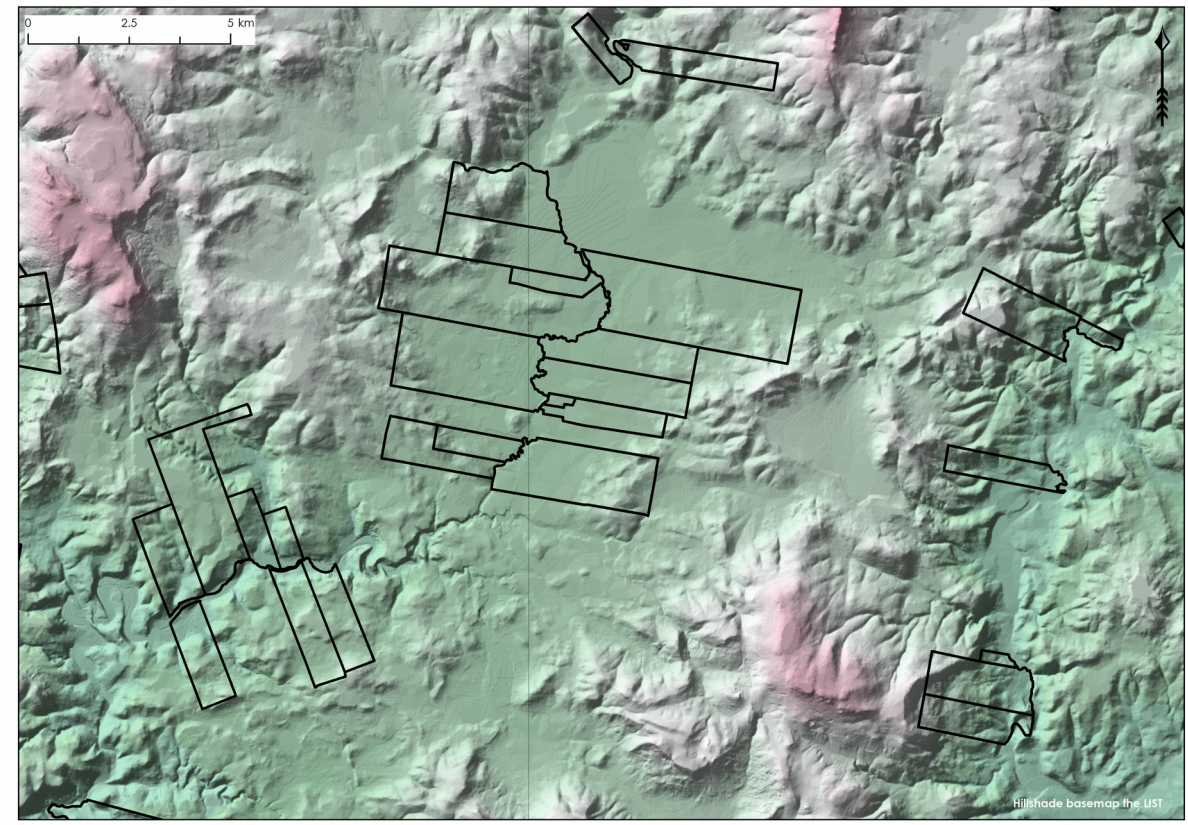

Figure 40: Intermediate free properties at Bothwell on a hillshade layer (LISTmap).

'For navigation or otherwise'

> It is also Our Will and Pleasure that in all grants of land to be made by You, as aforesaid, regard be had to the profitable and unprofitable acres, so that each grantee may have a proportionable number of one sort and of the other, as likewise the breadth of each track to be hereafter granted be one-third of the length of such track, and that the length of such track do not extend along the banks of any bay or river, but into the mainland, that thereby the said grantees may have each a **convenient share of what accommodation the said harbour or river may afford for navigation or otherwise.**[312]

While the riverine intensive pattern enabled the settlers to supply consumables to the government stores and ships, this was only useful if the farmers were able to transport it to the central warehouses. The importance of the river in the earliest stage of any colony as a highway for people, products and nutrients for the soils cannot be overemphasised. Soon after the site of New Norfolk was chosen to locate the Norfolk Island evacuees, it was praised by explorer and surveyor James Oxley as having 'a number of small rivulets,

[312] Emphasis added. Phillip's Instructions re Land Grants, 22 August 1789, HRA I (i), 126.

Figure 41: Sketch 13: the Huon River, 1829 (Scott).

intersecting the Country in every direction… the Main River being navigable for Boats for a considerable distance, affords an easy Communication with the principal Settlement.'[313] The earliest exploration charts are usually river-centric – from *Monmouth 0* showing the lands along the edges of the Derwent River, to those in Thomas Scott's journals that show small sections of land, intersected by a river, such as that seen in *Sketch 13*. This sketch demonstrates the reason for the prevalence of this focus. Captioned 'Sketch of the Huon River in sailing up in a Boat on a Voyage of Discovery', it reveals the main means of access to the area. Land featuring a network of rivers was easier to infiltrate than one without them, although as will be discussed, the presence of rivers also raised a number of problems.

The question of transportation compelled much of the focus on river edge settlement. The 1:3 Instructions demonstrate this in the first instance, but Oxley's focus on the connectedness of New Norfolk to the 'principal Settlement' reveals it as an ongoing concern. The riparian land offered settlers on it an advantage: the ability to transport their products to one of the large settlements for sale, or to bring in supplies at reasonable cost. The 1:3 Instructions were written to create a productive colony that could be more than just self-sufficient, a colony that could export excess produce to the rest of the empire. It was crucial that every person had the ability to move their goods in a timely and efficient manner, to encourage competition and productiveness.

The quality of roads in the colony remained a problem throughout its first thirty years. In 1816 the *Hobart Town Gazette and Southern Reporter* included the story of a man thrown from his cart and killed after he drove over a 'small stump of a tree standing in the road'.[314] When writing about the state of the road between Launceston and Hobart in 1826, the Land Commissioners reported that the farmers could only afford to send their grain thirty miles by cart. Throughout their report they suggested that the road needed correcting, that

[313] Report on Settlement, 1810, HRA III (i), 574.
[314] *The Hobart Town Gazette and Southern Reporter*, 9 November 1816, http://nla.gov.au/nla.news-article651638.

it did not follow the most direct route.[315] In 1837 Frankland recommended strengthening the Road Department, as there had been continual abuse of the roads and some had become unaligned. He refused to comment on the state of maintenance, as it was not part of his expertise, but his tone of disdain is clear.[316] Even with the construction of roads, rivers were still required – to provide safer transportation for people, or to float timber to mills, to name two examples. Their dominance at the centre of settlement patterns becomes clear.

And yet, not all settlements boasted navigable rivers. Bothwell, on the River Clyde, was opened for British settlement in 1821, after Sorell and Evans toured through the area and declared it would 'afford 10,000 acres with river frontage'.[317] Use of the river for local transport may have been possible, but the Clyde does not connect the settlement to Hobart due to several rapids and shallow sections in the mid reaches of the Derwent system. Three years after his tour, in handing over governance of the colony, Sorell reported to Arthur that he had ordered a road be built to the Clyde Settlement, as it was 'populous [but] had no water carriage'.[318] The value of establishing settlements on river edges was not only found in the transportation they offered, but in other aspects as well.

The most obvious is as a water source for stock and human consumption, and irrigation for dry lands. To this day, rivers are used for these purposes, albeit often with more regulation to prevent the pollution and overuse that caused so many problems in days gone by. Although the Van Diemen's Land colony was expanding at the same time as the development of steam power, the tools and methods used here were distinctly old fashioned. The strongest power supplies they had were oxen, men, wind and the water. In the earliest years of the colony, the abundance of land and labour meant there was no need for settlers to be efficient with either, and 'labour saving devices' were, for the most part, an unnecessary investment.[319] There were however, some exceptions. Scattered across the colonial landscape were water-powered mills. Managing a mill gave the owner a certain amount of power in their area, as the local residents were reliant on it for processing grains, and every settlement would have access to a mill. When Mr Armytage built a mill in

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315 Appendix B McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 111.
316 Frankland, *Report on the Transactions of the Survey Department*, 21–24.
317 Memorandums of a Tour, December 1820, HRA III (iv), 642–43.
318 Arthur to Bathurst, 9 June 1824, 147.
319 Raby, *Making Rural Australia*, 40, 49.

Figure 42: Ruin of Terry's mill at Tynwald House, New Norfolk (Imogen Wegman 2016).

Bagdad, *The Hobart Town Courier* informed its readers of the importance, telling them that previously settlers were 'obliged to carry their corn to Mr Terry's mill, at New Norfolk, and sometimes to Hobart town [sic] to be ground.'[320] *Buckingham 10* shows how a mill could transform the landscape, with a mill race running through John Terry's riverfront property. This waterway has a long straight section, dug out by convict labour, that then snakes up parallel to the Richmond Hill Rivulet (or Lachlan River today), connecting further upstream. In 1826 Terry told the Land Commissioners that for about six months of the year the mill would require all of the water in the river.[321] Although the land along this river was granted or sold eventually, the monopolising of the water supply may explain why the process was slower than in other areas. Although water was initially a shared resource, it too was enclosed along with the Crown Lands, as landholders privatised water sources for their own uses.[322]

Flood

For all the benefits, a farm on the river's edge is not without dangers and the relationship between the British colonists and flooding was complicated. The risk of flooding is both an

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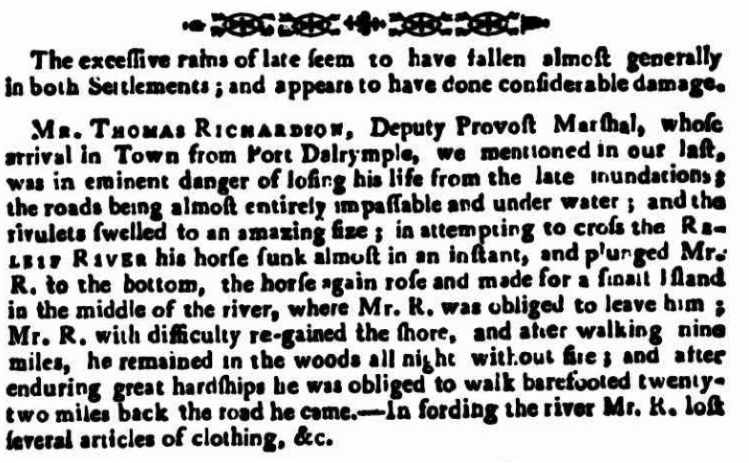
320 Sections of this mill race survive today, as does some of the building itself; *The Hobart Town Courier*, 19 December 1834.

321 McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 13.

322 Whether Van Diemen's Land followed English law in permitting use but not ownership of water is unclear, although there are numerous examples of individuals manipulating waterways to claim almost exclusive usage. It was not until the mid-1840s that, what Margaret Mason-Cox has called, the 'quest for a water policy' in Tasmania began. Until then it seems to have been largely unregulated. Margaret Mason-Cox, *Lifeblood of a Colony: A History of Irrigation in Tasmania* (Hobart: Rivers & Water Supply Commission, 1994).

advantage, as it can bring in fresh nutrients to the soils, and a disadvantage in that it destroys stock. Floodwaters transform a water highway into an impassable obstacle. Kathy Evans built an image of British colonists who assumed their homeland weather patterns were normal, and the extremes of this colony were aberrations rather than a different normal.[323] The British quickly discovered that the island had wet and dry seasons, but Evans suggests the British did not realise a reliable river in drought would flood in the wet.[324] Grace Karskens proposed an alternative view, suggesting that the British were quick and observant learners. At the Hawkesbury-Nepean, settlers who persisted through regular flooding held tight onto the reassurance that the floods would bring good harvests, after the damage had been repaired.[325] They knew the risks, but embraced them for the benefits they would confer.

The newspapers discussed floods with something close to voyeuristic pleasure, as disasters brought strife to individuals in a news-starved community. In August 1816, after 'excessive rains' made rivers swell to 'an amazing size', Mr Thomas Richardson was nearly swept away when trying to ford a river. He eventually made it back to the settlement of Port Dalrymple, after 'enduring great hardships', to tell his tale which was then reported in the *Hobart Town Gazette and Southern Reporter* to horrify all his fellow colonists.[326] Likewise, just a month earlier, the same paper had chided 'those farmers that neglected to take advantage of the fine and seasonable weather of the month of May…', for July rains had turned the ground into 'almost a quagmire', and sowing was no longer possible.[327] Ten years later, however, A. Shepherd wrote to the *Colonial Times and Advertiser* to complain about the timing of the new



The exceſſive rains of late ſeem to have fallen almoſt generally in both Settlements; and appears to have done conſiderable damage.

Mr. Thomas Richardson, Deputy Provoſt Marſhal, whoſe arrival in Town from Port Dalrymple, we mentioned in our laſt, was in eminent danger of loſing his life from the late inundations; the roads being almoſt entirely impaſſable and under water; and the rivulets ſwelled to an amazing ſize; in attempting to croſs the Ralph River his horſe ſunk almoſt in an inſtant, and plunged Mr. R. to the bottom, the horſe again roſe and made for a ſmall Iſland in the middle of the river, where Mr. R. was obliged to leave him; Mr. R. with difficulty re-gained the ſhore, and after walking nine miles, he remained in the woods all night without fire; and after enduring great hardſhips he was obliged to walk barefooted twenty-two miles back the road he came.—In fording the river Mr. R. loſt ſeveral articles of clothing, &c.

Figure 43: Richardson's escape from drowning.

[323] Discussed particularly in part two of Kathy Evans, '"Antipodean England"? A History of Drought, Fire and Flood in Tasmanian from European Settlement in 1803 to the 1960s' (University of Tasmania, 2012).
[324] Ibid., 74.
[325] Grace Karskens, 'Floods and Flood-Mindedness in Early Colonial Australia', *Environmental History* 21, no. 2 (2016): 332.
[326] *The Hobart Town Gazette and Southern Reporter*, 10 August 1816, 1.
[327] *The Hobart Town Gazette and Southern Reporter*, 20 July 1816.

Ross Market, as it would coincide with the 'annual floods' of early October.[328] Twelve months later the report on the September 1827 market at Ross noted that some stock could not be brought, because of the 'late unexpected floods'.[329] The market had apparently been moved a month earlier planned, perhaps because of Shepherd's advice. Nonetheless these examples highlight two contradicting responses to the Van Diemonian climate. There, the newspaper reporter upholding British expectations about a stable and home-like climate, contrasted against the stock-keeper, who by necessity understood the cycles of the antipodean climate. This was the difference between someone observing the land from the detached safety of an office, and someone who engaged with it on a daily basis.

While the earliest settlers chose riparian lands, for the advantages they conferred, it is apparent that they were also choosing lands that would drain when flooded – gravitating to areas with moderate drainage that would retain nutrients while resisting waterlogging. Nonetheless, the risk of flooding was real. And the solution on long-lot plots was again found in their shape. While individual blocks that stretched along the water's edge would have a large supply of alluvial and fertile soil, the landholders would risk being prevented from moving stock to a higher elevation during a flood, as that land might be held by someone else. Having both low- and upland acres mitigated this risk, and the long-lot form was ideally suited to this purpose.

In 1816 the *Hobart Town Gazette and Southern Reporter*, while berating those who had not yet sown their seeds, advised that farmers take 'particular care … in pasturing sheep', with 'all low lands to be strictly shuned [sic] and avoided.' The high lands would have less pasture, but the risks of the 'richer but flooded grass of the low lands' were higher than those of poor feed.[330] These floods would renew the lowland pasture in time, but while they were flooded it was vital that the settlers had somewhere to keep their flocks, who, after all, 'require the protecting hand of Man, more than any other of his domestic Cattle.'[331]

While arguments were had about the normal climate of the island, the landscape tells the story of farmers living on the riparian lands working to reduce the impact of inclement

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328 'Ross Bridge Market: To the Editor of the Colonial Times', *Colonial Times and Tasmanian Advertiser*, 22 September 1826, 4.
329 'Ross Market', *Colonial Times and Tasmanian Advertiser*, 14 September 1827, 3.
330 *The Hobart Town Gazette and Southern Reporter*, 20 July 1816, 1.
331 2.

events.[332] Through drainage ditches and embankments they sought to reduce waterlogging and flooding, while also diverting rivulets to flow more favourably. These methods were brought out from Britain, which in turn had learnt to drain marshland from the Dutch and Belgians.[333] *Buckingham 20* captured these efforts, by including William Parramore's ditch and embankment on the marshy land east of New Norfolk, on the banks of the River Derwent.[334] Designed to stop water flowing onshore and to drain the boggy land, this was an attempt to reclaim land. Unfortunately *Buckingham 20* is not dated, and it is not possible to know whether these projects were related to land pressure, or simply a desire to access the rich river soils. Both of these purposes are likely, and again relate to the long-lot shape that ensured both good and bad land were given to the grantee, who wished to make his fortune from it.

DROUGHT

At the other end of the spectrum, the Tasmanian landscape regularly suffers from seasonal and ongoing droughts. Again, this was an event the British learnt about over time. Drought would very quickly become established as a problem for the British, as the stream supplying the Risdon Cove camp dried in the summer.[335] While also accompanied by other factors, this was not the last time the colonists were forced to relocate or significantly adapt to a lack of water. Surveyors learnt to look for locations that had a steady supply of water in the summer months when scouting out new settlement sites, although these sites were then at a higher risk of flooding in the winter.[336] Eventually they would learn that some parts of the island have rivers that are more reliable all year than others – the Jordan River running north of Hobart is today a bare trickle in summer, but flooding is not unknown, while the South Esk River caused Paterson great dismay when he found the previous fresh flow had become salty during a dry period.[337] Disillusioned with conditions, Patrick Wood wrote to Brisbane in 1823, complaining that the 'want of a sufficient quantity of rain' was

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[332] In her thesis, Evans argues that exaggeration about a stable climate was part of the rivalry between New South Wales and Van Diemen's Land, and was used to draw in new emigrants. At the same time other authors wrote about the wild variation found throughout the year, warning prospective emigrants. Evans, '"Antipodean England"?', 105–17.

[333] Williamson, *The Transformation of Rural England*, 103–5.

[334] *Buckingham 20: Parish of Glenorchy*, n.d., n.d., AF 396/1/23, TAHO, https://stors.tas.gov.au/AF396-1-23.

[335] Drought conditions were observed by Nicholas Baudin in 1802, but by the arrival of Bowen in 1803 the rains had fallen and Risdon Cove was again green. Evans, '"Antipodean England"?', 68.

[336] Ibid., *72*, *74*.Evans, *72*, *74*.

[337] Liza Fallon et al., 'Jordan River Flood Data Book' (Tasmania: Department of Primary Industry, Water and Environment, 2000); Evans, '"Antipodean England"?', *74*.

preventing him from improving his land[338]. This particular property was on the edge of the River Clyde, in Bothwell, laid out in the intermediate free pattern. This was not a problem with the layout of the grant, but the actual location. The water supply was simply not sufficient for his purposes.

Figure 44: Improvements along the Derwent River (Buckingham 20).

The period characterised by the riverine intensive pattern (1803–17) was focussed on founding a system of agrarian small-holdings. Both New Norfolk and Norfolk Plains were established as areas of settlement in the wake of the 1805 to 1807 drought that brought the nascent colony to the brink of starvation. It is inconceivable that drought prevention was not a consideration in the choice of these sites. Evans' only comment on the period after the 1805–7 droughts is that that 'by the 1810s…there was a return to more favourable seasons'.[339] Drought caused problems for different agricultural and pastoral pursuits at different points in time. Initially, when the focus of the colony was establishing agriculture, it was primarily the fields of wheat, barley and other crops that suffered. Later, when Wood was beginning his expansion into the Bothwell surrounds, the focus shifted to fine wool production, an industry with markedly different water requirements from those of

[338] Wood to Brisbane, 6 October 1823, HRA III (iv), 527.
[339] Evans also noted that this drought coincided with a major El Nino event. Evans, '"Antipodean England"?', 77–8; 81.

agriculture. Naturally, some concerns were consistent throughout this time, particularly personal water supplies. Protecting the Hobart Rivulet had been among Collins' first priorities, with rules curtailing development on the banks established from 1804.[340] By 1825, when Hobart Town had expanded beyond the capacity of the Hobart Rivulet, discussions revolved around maintaining a water supply to the local industries and houses. The prominent settlers noted that in summer there was scarce enough water in the Hobart Rivulet to operate the mills, so that grain was only being half ground.[341]

Early knowledge of droughts crucially affected the choices landholders subsequently made in selecting their acreages. Chapter Five will discuss the later movement into grazing away from the riparian land, and the impact this had on granting patterns, but the adherence of settlements to the river edges in the riverine intensive period demonstrates an intentional awareness of their usefulness.

Conclusion

The long-lot pattern has a long history of use in settlements around the world. It has been adapted to the circumstances of each situation, and Van Diemen's Land was no different. In creating the 1:3 Instructions, the Colonial Office drew on an understanding of valley flat and hill-slope soils. The outcome bore some resemblance to the strip farms of parts of England, but this was primarily because of their connection to the transport arteries (rivers in the colonies, roads in England) rather than in the layout on the land itself. The instructions were designed to give landholders their best chance of self-sufficiency, by directing them to the land most likely to succeed. A long-lot grant provided river-edge land for the dry season, but also high ground to protect stock during the wet. The fact this layout was followed for longer in Van Diemen's Land than in New South Wales, suggests that it was an effective way of managing the topography and associated resource challenges of the southern-most colony. Even when free settlers were able to chose their own land, they continued to follow these guidelines, albeit on an expanded scale.

Eventually, the long-lot pattern faded as settlers moved inland, motivated by changing agricultural practices which provided opportunities to exploit less well-watered land. Until

[340] Collins to King, 21 February 1804, HRA III (i), 219; Evans, '"Antipodean England"?', 72.
[341] *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 18 February 1825, 2.

that point, however, the British were reliant on the rivers for both on- and off-water reasons. The waterways provided exploration and expansion routes through the lands before roads were constructed, and continued to transport goods to the major hubs for many years. They also helped to ensure that the former convict populations that were settled on the land remained within easy reach of centres of colonial administration. As well as operating as a conduit for nutrients to enrich the riparian lands, they provided a ready source of energy. Industries were reliant on rivers for powering equipment, and as wealthy landholders emigrated to the colonies, they brought with them the means for establishing mills in their local areas. For them, the river edge land was not only fertile, it also provided the opportunity to expand beyond farming and into processing goods.

Chapter Five:
Open Extensive

> It is a source of sincere Gratification to the Lieutenant-Governor that the large Influx of People which His Excellency the Governor in Chief has been pleased to direct to this Settlement during the last twelve Months has conduced materially to the Advancement and Improvement of the Colony, in affording the Means of increased Cultivation, of reducing the Price of Labor, and in generally bettering the Condition of the Settlers.
>
> - *Hobart Town Gazette and Southern Reporter*, 10 October 1818[342]

In 1817 Van Diemen's Land began to welcome in free settlers from Britain and Ireland, who arrived with the hopes of establishing a prosperous estate on the promise of land grants and access to cheap convict labour. The extent of land on the island was unlike anything available in Britain, particularly in a time of rapid agricultural and industrial transition. Land in Britain was expensive – rent has been calculated at fourteen shillings per acre in 1800, while in 1789 Governor Phillip had been instructed to charge one shilling per ten acres in New South Wales, and that was due only after a period of ten years.[343] As the colony transformed from one of subsistence to export farming, the amount of land made available for settlement increased exponentially. The enthusiasm with which Van Diemen's Land became a popular destination in the wake of the Napoleonic Wars can in part be explained by conditions in Britain. The colony was also attractive, however, because of the infrastructure developed during the riverine intensive phase of settlement. The development of Aboriginal tracks into roads made the hinterlands accessible for alienation, but ports, wharves, and administrative and financial structures helped to form waypoints that facilitated further expansion. The influx of new settlers and an accompanying shift in agricultural priorities removed the reliance (and associated tether) to the rivers as the principal means of transportation.

As New South Wales was adopting a rectilinear pattern, laying settlements out in grids across the land, Van Diemen's Land was shifting from riverine intensive, through intermediate free, to an open extensive pattern of land settlement. A feature of this was the alienation of large isolated acreages taken from Crown lands as the Europeans moved further into the fire-stick farmed 'plains'. These 'island' grants were still intrinsically reliant on environmental factors, and this chapter examines the environmental appeal and inherent

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342 'Govt. and General Orders', *The Hobart Town Gazette and Southern Reporter*, 10 October 1818.

343 J. V. Beckett, 'The Debate over Farm Sizes in Eighteenth and Nineteenth Century England', *Agricultural History* 57, no. 3 (1983): 312; Phillip's Instructions re Land Grants, 22 August 1789, HRA I (i), 125.

dangers of their locations in order to ascertain the priorities that influenced the choice of location.

The chapter argues that open extensive settlements, characterised by poorly defined boundaries and isolation, were the complete opposite of their predecessor. A nuanced examination of the different stages of settlement shows that open extensive plots were emblematic of the societal changes within the colony. This chapter demonstrates the co-dependent relationship between settlement expansion and growing export markets, aided by the settlers' own manipulation of the system. Relevant issues are the agricultural heritage the free settlers brought from the British Isles, as they sought success in the colonies; the environmental conditions they found here; and the overarching principles and priorities that pushed them away from the riparian lands into the interior of the island. Running parallel to these themes was increasing tension with the Tasmanian Aboriginal people, pushed further to the edges by this new form of European expansion.

This chapter starts with discussion about agriculture in Britain, and the freedom Van Diemen's Land presented for many. Open extensive accompanied significant alterations of official policies, and this chapter asks how the necessity to maintain surveillance over the convicts in the remote districts shaped the pattern. It then examines the relationship between two forces – availability of acres and an increasing population, and the benefits and disadvantages each offered. The relationship between grants and rivers shifted dramatically with this pattern, and this chapter investigates the main cause behind that, before finally discussing the environmental conditions of open extensive acreages – soils, topography and water.

Policy and Regulations

In the eighteenth century, British agriculture underwent a rapid transition, as it attempted to keep pace with rising population levels and the new market opportunities associated with rapid urbanisation and industrialisation. Before 1750, there had been significant regional piecemeal enclosure, although the precise extent of medieval enclosure remains contentious. After 1750, the speed of change increased, and it is estimated that approximately 21 percent of land in England was enclosed by parliamentary act, while

non-parliamentary enclosure simultaneously continued in some regions.[344] The Britain Captain Arthur Phillip left in 1787 was at the beginning of a century of 'unprecedented change and productivity in English agriculture'.[345] Over the coming four decades agricultural output would double in Britain, as the 'Norfolk four-course' system gained popularity and new technology was introduced. Later observers of Australian agriculture found it severely wanting when measured against the modernised ideals of farming that rapidly took hold in industrialising Britain.[346] Nonetheless, those who established the first colonial farms in Australia drew on an ad-hoc mixture of new and old ideas, some the remnants of medieval farming, others the new ideals of the 'Age of Improvement', all adapted to suit Antipodean conditions.

By the end of the eighteenth century, the majority of farms in England were held by tenant farmers, working for a landlord. The agricultural scene was crowded, with 300 acres considered to be a substantial farm.[347] The fens of East Anglia had been under drainage since at least the seventeenth-century, as Britain attempted to find more land to feed its increasing population and appease the land-hungry gentry.[348] In the aftermath of the Napoleonic Wars, the British government started to actively promote emigration to the colonies. The laws of primogeniture ensured that only the first-born son would receive the family estate, leaving the younger brothers to find their fortune in the church, law or military. Leaving Britain to establish an estate elsewhere in the British Empire was an appealing option for many, particularly as prudence could result in excellent value for money. Guidebooks were published encouraging emigration to the colonies, giving helpful information about what to pack, how to choose land, and common pitfalls to avoid.[349]

Until 1821, there was very little change to the instructions sent with the First Fleet that established the riverine intensive pattern. In 1813, Macquarie suggested to Bathurst that a

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344 Williamson, *The Transformation of Rural England*, 13.

345 M. Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850*, Cambridge Studies in Historical Geography (Cambridge University Press, 1996), 3.

346 Bigge, *Report on Agriculture and Trade in N.S.W*, 27; Dixon, *Narrative of a Voyage to New South Wales and Van Diemen's Land in the Ship Skelton During the Year 1820*, 91–94.

347 Williamson, *The Transformation of Rural England*, 16–17.

348 T. A. Rowell, 'The History of Drainage at Wicken Fen, Cambridgeshire, England, and Its Relevance to Conservation', *Biological Conservation* 35, no. 2 (1 January 1986): 111–42.

349 For example see: Wentworth, *A Statistical, Historical, and Political Description of the Colony of New South Wales*; Evans, *A Geographical, Historical, and Topographical Description of Van Diemen's Land*; E. Curr, *An Account of the Colony of Van Diemen's Land: Principally Designed for the Use of Emigrants*, Reprint (George Cowie and Company, 1824).

3000-acre maximum be set, after clashing with the powerful Hobart Town settler Edward Lord. This is the same Lord who was involved in a dispute with the surveyor Harris in Chapter Three, a man not well-remembered by history – Macquarie told Bathurst that 'Mr Lord thinks, because he happens to have a Wealthy Brother, who is a Member of Parliament, he ought to receive whatever he asks for.' He thought that 3000 acres was 'quite enough for any Person coming out to this Colony in Mr Lord's Rank in Life.'[350] Beyond this there was little official change. Melville wrote a glowing description of Lieutenant Governor Sorell's work in the colony, which had lifted it from 'a wilderness to be a populated settlement…a jail on a large scale, to a British colony, highly favored by the Mother Country…'. Sorell had done everything possible to encourage industry and expansion, providing 'favorable prospects' for emigrants.[351] This generosity was challenged in later years when the Land Commissioners and Frankland made the accusations about the whole system, discussed in Chapter Three. In fact, Macquarie's instructions to Sorell refused him permission to grant land. That did not stop him, particularly as the colony was flooded with new free settlers seeking to make their fortune in the colony.[352]

This was, however, a time of consequential change in the colony. The arrival of free emigrants seeking larger land grants heralded the start of a complete transformation of social, political and physical landscapes. Until 1817, the population of Van Diemen's Land was made up of 17.7 percent serving convicts, but Boyce observes that from 1817 until the 1850s this increased sharply, never dropping below 30 percent.[353] Hartwell noted the difficulties in these calculations, where a large part of the 'free' community comprised 'graduates' of the convict system. The proportion of settlers who came to the colony of their own volition is not known.[354] While the balance of power was still in the hands of the most superior members of the society, individuals transported to the island had the opportunity to make lives for themselves after serving their sentences. The policy of granting land to every emancipist, and providing assistance in establishing them on it, plus the abundance of fresh water and nutritious food, meant that in the early years of the colony the Europeans living in Van Diemen's Land were healthier than their counterparts in

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350 Macquarie to Bathurst, 28 June 1813, HRA I (vii), 726.
351 Melville, *The History of Van Diemen's Land*, 15–26.
352 Enclosure no. 4: General Orders, 14 December 1816, HRA III (ii), 191–92.
353 Boyce, *Van Diemen's Land*, 105.
354 Hartwell, *The Economic Development of Van Diemen's Land, 1820-1850*, 68.

Britain.[355] It is no wonder then, that there was a concern that transportation was losing its deterrent value, that it could even encourage offending, if petty criminals sought to use the courts as a means to receiving a fresh start.[356]

Aware of these changing attitudes, the British government commissioned John Bigge to evaluate the efficacy of transportation to the New South Wales colony. Bigge had a legal and administrative background, having been a lawyer and then the Chief Justice of Trinidad, and was commissioned to report on the judicial systems, agriculture, and overall state of the colony. Trinidad was used primarily for monocultural sugarcane plantations, and Bigge's reports on New South Wales and Van Diemen's Land reflect both his British origins and unfamiliarity with the polycultural practices of the Australian colonies. He recommended that land should be reserved for free settlers who brought considerable capital with them (a minimum of £500, although this included assets). As for the emancipist population, Bigge recommended that 'persons of this class' continue to receive land grants, reducing the previous allowance to twenty acres of rich soils close to the towns. This was to ensure that those settlers who did not have the recommended £500 would still be able to provide for themselves and families, rather than relying on government stores. It had the additional benefit of keeping former convicts close to the centre of government, and therefore under the observation of their administrative superiors. Bigge's recommended scale of required capital and corresponding acres (figure Error: Reference source not found), however, reveals a push towards larger acreages.[357]

£	acres
500	500
750	640
1,000	800
1,500	1,000
1,700	1,280
2,000	1,500
2,500	1,760
3,000	2,000

Figure 45: Bigge's proposed scale of acres available, by capital held by the applicant.

One of his key recommendations was that the colony be divided into an English system of counties, hundreds and parishes. This would impose order on what he perceived to be a disorganised landscape, correcting the damage of haphazard land granting practices. While the emancipist grants of New Norfolk had been set out according to colonial instructions,

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355 Kris Inwood and Hamish Maxwell-Stewart, 'Introduction: Health, Human Capital, and Early Economic Development in Australia and New Zealand', *Australian Economic History Review* 55, no. 2 (1 July 2015): 1.

356 For example see: Lucy Frost, *Abandoned Women: Scottish Convicts Exiled beyond the Seas* (Allen & Unwin, 2012), 15–16.

357 Bigge, *Report on Agriculture and Trade in N.S.W*, 48.

ensuring continuing governmental surveillance, the 1820s were equally controlled, but settlers were given the illusion of choice. Van Diemen's Land was, after all, effectively a prison island, and organisation was a cornerstone of maintaining the appearance of control. The colony offered certain benefits for the free settler – cheap and abundant land, and government-assigned labour – but these still had a cost. As well as managing an often unwilling and unskilled workforce, the settlers were also co-opted into the role of ancillary convict administrators, responsible for their oversight when away from the government centres.

Instead of being directed to a specific pre-determined acreage, they were advised by the Survey Office of the district currently 'open' for settlement. Within that area they could choose any unalienated land. By sending them to a particular region, necessitating official documentation of their choice, and then later requiring land commissioners and surveyors to report on cultivation and land use, the colonial government demonstrated that it was just as concerned with monitoring the free settlers, as well as the convicts, in the penal colony.

Lieutenant-Governor George Arthur is today often seen as the face of penal reform in Van Diemen's Land, as the namesake of the island's most famous convict site, Port Arthur penal station. His predecessor, Sorell, started the process that Arthur subsequently inherited. Sorell also introduced new systems for regulating the assignment of convicts, and their use as governmental labourers.[358] Where previously convicts and free settlers were forced by circumstance to work alongside each other, new settlement patterns enabled the introduction of administrative systems based on social status. As the colony achieved not only self-sufficiency but also an exportable surplus, landholders were able to distance themselves from their workforce. Indeed, stratification was actively pursued, as over-familiarity (as well as brutality) between master and assigned servants could lead to the former being 'black-listed' and unable to receive convict workers.[359] This was further enforced as the construction of convict and servant quarters physically separated the workforce from their masters. Around 1820, commentators on the colony noted that emancipists could make good farmers, but attitudes changed over the next decade as

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[358] For example, the first attempt to keep a central register of all charges against convicts dates to Sorell's period in office. See 'HO 10. List of Convicts (Incomplete)' 1817, HO 10/43, TNA; Mickleborough, *William Sorell in Van Diemen's Land*, 60.

[359] A. McKay, 'The Assignment System of Convict Labour in Van Diemen's Land, 1824–1842' (University of Tasmania, 1959), 119–24. Cited in Maxwell-Stewart, 'The Bushrangers and the Convict System', 87.

British ideals of farming permeated colonial society.[360] This was a period of both agricultural and intellectual improvement. In 1821, the colony's first agricultural society was launched, the Van Diemen's Land Agricultural Society. In a paper listing the different societies, E.L. Piesse told his audience in 1913 that this society was intended to 'put down sheep stealing', but it also considered husbandry among its topics for discussion. Within the same decade, the Mechanics Institute (1826) was established to discuss 'astronomy, steam engines, and chemistry', and the Van Diemen's Land Scientific Society (1829) followed soon after to pique the interest of the wealthier landowners.[361]

These attitudinal changes manifested in policy changes that excluded emancipists from land ownership. In 1821, Governor Macquarie set the minimum land grant size at 100 acres, while no more than 2000 acres would be granted 'however great [a settler's] Capital may be'. Explicitly this was intended to rationalise the allocation of available acres, as Macquarie argued that 2000 acres would be 'sufficient for Grazing or Cultivation for many Years'.[362] In November 1821, £100 of 'Real Capital' would provide 100 acres to the holder, but by 1822 G.W. Evans reported that only people with more than £500 capital were officially permitted to receive land grants (the amount that would be recommended by Bigge the following year). Evans advised his readers that the origins of this rule were unknown, but speculated that it may have been to drive less-wealthy (and therefore desirable) emigrants to the United States.[363] It also prevented the majority of existing emancipist landholders (and their families) from expanding their acreages. The truth of Evan's conjecture is almost irrelevant – at the very least it reveals that the Australian colonies used land alienation practices to attract migrants of a higher status than the United States. In 1824 Lieutenant-Governor William Sorell addressed the problem of people submitting false claims of capital, concluding that they would suffer the consequences of their own lies: '…the Settler, who commences without [sufficient capital], must sink himself in Debt, from which He can rarely if ever extricate himself.'[364] In 1827, the Land Grant Terms set by the Colonial Office stated that the minimum grant size was 320 acres (and the maximum 2560 acres), and Earl Bathurst told Arthur that grantees were required

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360 Dixon, *Narrative of a Voyage to New South Wales and Van Diemen's Land in the Ship Skelton During the Year 1820*, 91–94; Bigge, *Report on Agriculture and Trade in N.S.W*, 27.

361 Edmund Leolin Piesse, 'The Foundation and Early Work of the Society; with Some Account of Earlier Institutions and Societies in Tasmania', 1913, 118; 123.

362 Governor Macquarie to Earl Bathurst, 28 November 1821, HRA I (x), 568.

363 Evans, *A Geographical, Historical, and Topographical Description of Van Diemen's Land*, 114–15.

364 Sorell to Horton, 19 November 1824, HRA III (iv), 573–74.

to be over twenty-one years old, to stop colonists abusing the system by claiming grants for their infant children.[365]

Different regulations and shifting priorities ensured that open extensive plots had a distinctive appearance from riverine intensive. The key differences were size, proximity to other land grants, and water requirements. The issue of size has already been discussed, as free settlers were encouraged to emigrate and establish larger landholdings than their convict forerunners. By rejecting a rectilinear layout, the Van Diemonian settlers were arguably able to make better use of their land, because they were not required to fit within set dimensions. This made it easier to ensure that a grant encompassed a higher proportion of what the settlers considered to be good land, as they appropriated it from its Aboriginal custodians.

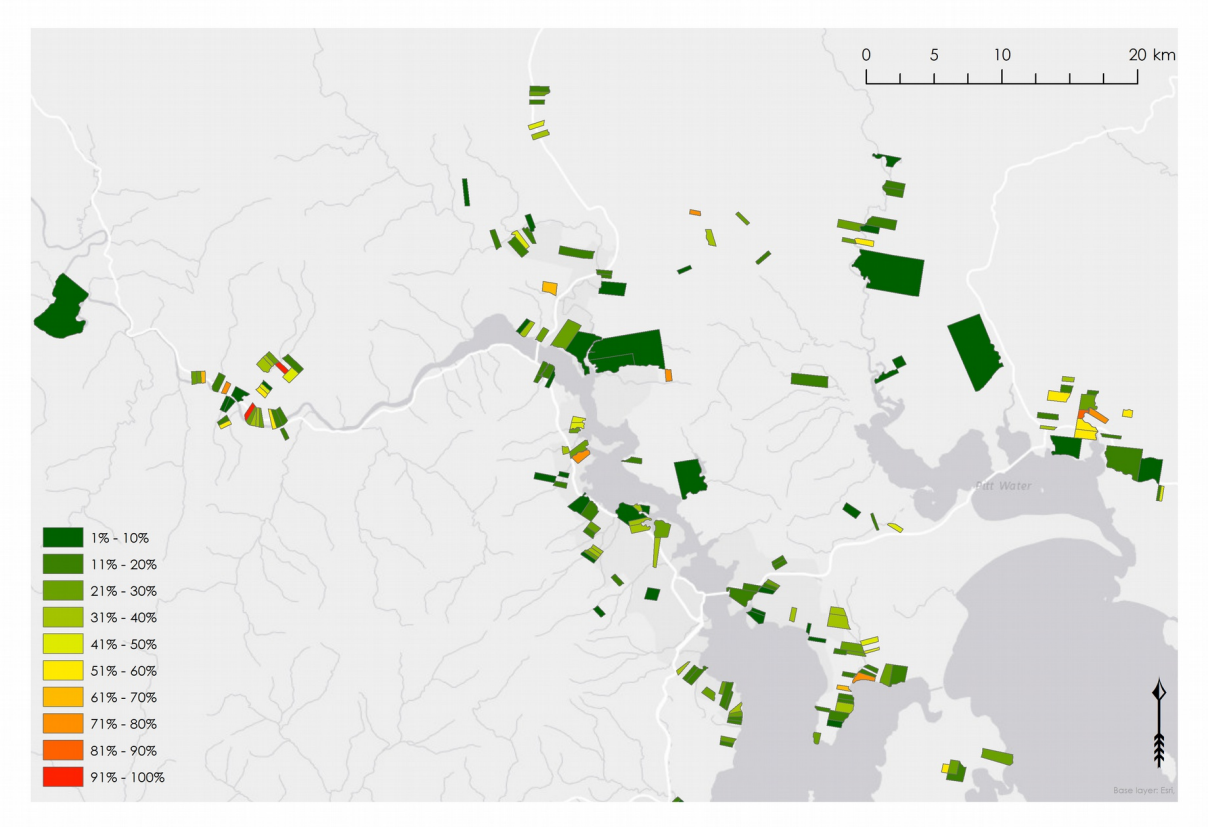

Figure 46: The proportion of each plot under cultivation, according to the Muster and Evans in 1819.

In an 1819 classified advertisement for a forty-acre farm, entirely under cultivation, the merits of the land are lauded: a 'large Quantity of unlocated Land joining the Boundary of this Farm, which will be of great advantage to a Settler possessed of a Capital, and willing

[365] Earl Bathurst to Lieut.-Governor Arthur, 2 February, 1827, HRA III (v), 506; Colonial Office, 'Terms upon Which Land Is Granted to Settlers in New South Wales and Van Diemen's Land', April 1827, TL.PQ 325.342 GRE, TAHO.

to carry on extensive cultivation'.[366] The hyperbole in this advertisement is clear – a property under entire cultivation was unusual, the 1819 Hobart Muster (figure 46) shows that average cultivation was 25 percent of the property, the rest listed as pasture. Only 20 of the 210 properties with listed acreages had more than 90 percent under cultivation. The location of the advertised property is unknown, listed only as in one of the 'pleasantest and most romantic Districts'. The colonial habit of embellishment means this could have been any of the settled districts, while the principles of real estate advertising might equate 'romantic' with 'isolated'. It is impossible for a property to be bounded by Crown land, while also featuring close neighbours, and therefore such a property must have been somewhat isolated.

The significance of this is two-fold. First, it demonstrates that the push to ensure safety by keeping close to administrative centres had lessened, and that room for expansion was more marketable than the safety of close neighbours. This would come to have important ramifications for the settlers, their workforce, and the Aboriginal populations, and led to what is today know as the Black War. Second, it shows that the growth of export-orientated wool production required this transition in priorities from safety to a more dispersed settlement pattern. With a shift in balance of land grantees, from primarily convicts to mainly free emigrants, came a subtle change in governmental oversight. The government had less duty of care for the free settlers – they had come voluntarily to the colony, rather than through transportation, and could be trusted (or left) to make their own choices about establishing their Van Diemonian lives. One effect of this was less-regulated land occupation, leaving settlers to more freely choose their own acreages.

Settlers grabbed at any scraps of land they could find and would make claims on their children's behalf in order to increase their ability to enter into the thriving export markets. They had different goals from that of earlier grantees, as the 1820s saw the development of an export-orientated wool market in Van Diemen's Land. Prior to this there had been sheep on the island – Bowen brought some with him to the Risdon Cove settlement.[367] These sheep were, however, usually used for meat, their wool shorn and either burned or used as mattress filling. Experimental wool sheep ('near to the Spanish [merino] type') were sent to Van Diemen's Land in 1805, but it was not until 1822 that wool was exported

[366] 'Classified Advertising', *The Hobart Town Gazette and Southern Reporter*, 4 December 1819.
[367] Morgan, *Land Settlement in Early Tasmania*, 59.

from the island to London.[368] By 1831, the colony was able to export 1 359 203 pounds of wool to Britain, a massive industrial expansion in just ten years.[369] The impact this had on the landscape was enormous, and was a prime motive behind the shift from the long-lot forms of grants to the open extensive.

With the movement of Europeans to the interior of the island, however, came further difficulties of regulating boundary control, and ensuring people actually did pay for the extra land they took in. Since the beginning of the colony, it had been common practice to silently expand beyond the boundaries into the surrounding Crown land. People seeking their own grant were then confronted with sheep on apparently available land. By the open extensive stage two opposing priorities had started to clash – the need for large acreages to build a successful business on, and the growing number of people seeking to start such an enterprise. The amount of land was finite, particularly that which had been already been cleared by pre-European fire-stick farming. It was possible for people to either expand onto the Crown land, or for more people to receive land. The latter was more profitable for the government, particularly because the increasing numbers of respectable free settlers would only raise the reputation of the colony.

Open extensive plots were only truly possible in a flexible space. As landholders intentionally chose land surrounded by unclaimed territory, they obliquely stated an intention to expand beyond their allocated acres. While discussing the lack of obligation on settlers to build fences, the *Hobart Town Gazette* recognised the significance of losing access to the extra acres '… there are many to whom it would be death to be confined within the limits of their own grants, abridging so materially as it would, the advantages they enjoy by the full liberty of grazing upon Crown land…'[370]

Access to water, however, remained a critical issue, although open extensive settlement patterns were less tied to large rivers and estuaries than the old long-lot riparian patterns. The uses of water changed, as over-land travel became more viable, and therefore the desired qualities of the watercourses transformed. Nonetheless, the settlers sought water.

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368 West, *The History of Tasmania*. in Kirkpatrick, Bridle, and CSIRO (Australia), *People, Sheep and Nature Conservation*, 9.
369 Kirkpatrick, Bridle, and CSIRO (Australia), *People, Sheep and Nature Conservation*, 9.
370 'Miscellany, Original and Select', *Hobart Town Gazette*, 2 December 1826.

Just as riverine intensive lands were chosen for their environmental appeal, in spite of the dangers so, too, were open extensive plots.

Environmental considerations

The chart *Monmouth 65* shows the Southern Midlands town of Oatlands, and its surrounds, with rivers and mountains shaded in.[371] Figure 47 shows only the boundaries from this chart. The shape of the river is still visible, preserved in the shape of the western boundary of a row of long-lots (striped). Many of the open extensive plots (shown in grey) have curving, river-edge boundaries, but a there are also some of these large grants that do not. A modern chart of watercourses reveals that these properties still had water access. It must be remembered that these waterways have possibly been altered over two hundred years of British agriculture, and that some rivers and dams have dried over the years, so they no longer appear on modern charts. The LDC show some waterways, as do some of the county charts. Together these resources reveal the relationship between the early open extensive land grants and water availability.

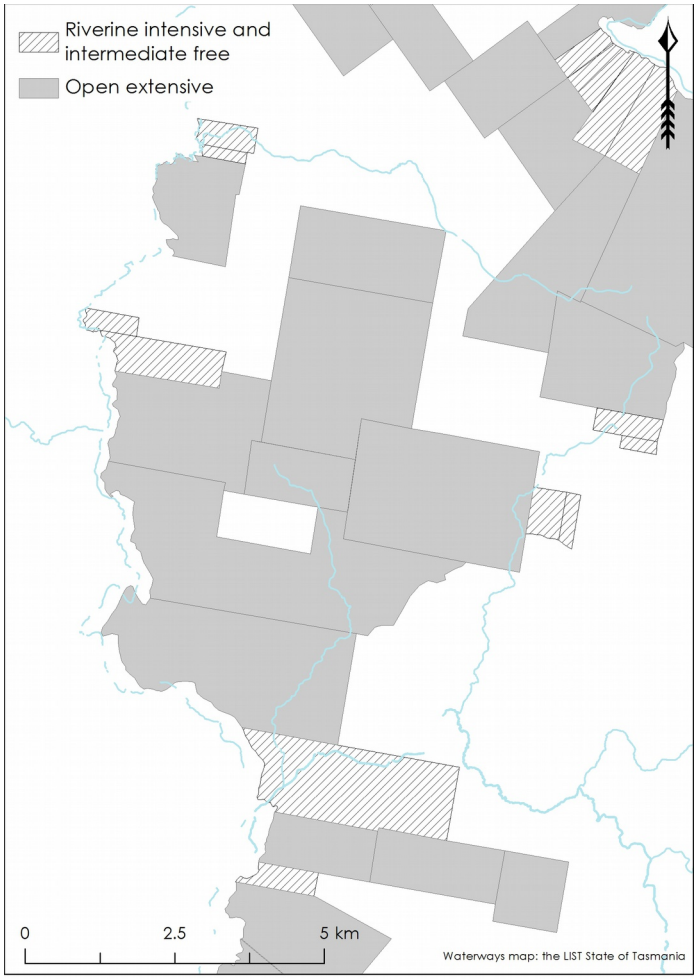

Figure 47: Monmouth 65, redrawn with major waterways (LISTmap).

In the earliest years of the Van Diemen's Land colony, when the majority of landholders were emancipists, each person held a grant of land from which they were expected to sustain themselves and their family. Although some of these former convicts were successful in obtaining extra land, the majority did not. They sought food, shelter, and enough surplus for sale to buy those staples they could not grow. Bigge noticed this,

[371] 'Monmouth 65'.

criticising the settlers and saying that 'there are no individuals of any class that have shown a disposition, or have possessed the means, of commencing and continuing any system of improvement.'[372] While he was generally dismissive of the farming abilities of the former convicts, encouraging the increase in minimum grant sizes to reduce the land held by anyone of lesser means, his statement was also revelatory about the general attitude towards improvement. He talked about the habit of 'large capitalists' to buy up the small properties, consolidating them into one, which in turn led to the small landholders to 'abandon the cultivation of land'.[373] Nothing in the image he painted suggests an entire population of enthusiastic emancipists relishing their newfound agricultural skills while aiming for success and fortune.

Figure 48: Perth and its surrounds on the South Esk River, Inset: detail of farming (Cornwall 33).

372 Bigge, *Report on Agriculture and Trade in N.S.W*, 29.
373 Bigge, 36.

Holders of riverine intensive land were required to use the land for all their needs. The earliest surviving charts do not include any detail about land division within the grants – they were created at the peak of pressure on the Survey Office. Only the musters, with their breakdown of crops and livestock on each grant, reveal how diverse these properties were. From the 1820s onwards, small details were occasionally incorporated into the large areas surveyed. These included enclosed land, probably securing crops away from the greedy mouths of sheep and cattle; occasional stockyards; and huts scattered across the landscape. The undated *Cornwall 33* (figure 48) shows a working landscape, with a number of cultivated fields indicated by horizontal lines shading (mostly) enclosed areas.[374] Other areas have been left blank, and were probably home to stock. These lands were being used for grazing and cultivation, possibly even for several different crops, but there was a commercial aspect to these fields that was not present in the much smaller polycultural riverine intensive blocks.

Figure 49: Land alienation in New Norfolk and surrounds, between 1807 and 1831.

By the 1820s and the era of the open extensive plot, it was common practice for settlers to hold several pieces of land, sometimes scattered across the island, each with its own

[374] *Cornwall 33: Township of Perth, South Esk River, Launceston to Perth Road, Road to Gibson's Ford and Various Landholders*, n.d., n.d., AF 396/1/1357, TAHO, https://stors.tas.gov.au/AF396-1-1357.

purpose. The settler would often also have an urban home, in Hobart Town or Launceston, to be close to the bureaucracy (and society) of the colony. Where the 1:3 Instructions were intended to create polycultural landholdings, by ensuring equal access to the river and good and bad land, the open extensive settlers had no obligation to provide for all their needs from one location. It is for this reason that the water requirements were significantly different, and dependent on land use.

The expansion of New Norfolk settlement across the landscape reveals the significance of the earliest acreages for enabling those given to later settlers. Figure 49 shows the alienation of New Norfolk and Macquarie Plains at five-year intervals. Two very clear and distinct patterns emerge. The earliest years, this data confirms, were focussed entirely on the Back River and along the Derwent River in a riverine intensive pattern. The actual township was on the west bank, where it remains today. The land at Macquarie Plains was, however, alienated almost exclusively as intermediate free and open extensive plots, by wealthy settlers. It came down to a question of access to these plains.

Figure 50: New Road from New Norfolk, c.1825 (Unknown).

Meehan described a waterfall above the Back River that prevented navigation.[375] Further up the Derwent from New Norfolk are the Plenty Rapids, where the Railway Bridge crosses today, but it is possible that those shown by Meehan were one of the patches of rock scree near where Back River joins the Derwent River, particularly visible in dry

[375] Meehan, 'Monmouth 0'.

weather. This rapid formed the river boundary between riverine intensive and open extensive settlements, and ensured that any further expansion from the initial New Norfolk settlement would need the constructions of an overground communication route.

When the Land Commissioners noted that farmers could not afford to send grain further than thirty miles by cart to Hobart Town or Launceston (in 1826), it can only have been an improvement on the situation of five or ten years earlier.[376] Before an area was settled, it was probably accessible by Aboriginal tracks, and through the cleared plains discussed in the next chapter, but these routes were not of the same (admittedly low) standard of British-made roads. Thirty miles with a laden cart was optimistic under those conditions. It was therefore necessary to have a closer hub through which to travel. Beyond New Norfolk progress up the Derwent River was impeded by rapids. A road heading northwest was created, probably that seen in figure 50, an unattributed painting from 1825. It was only with the creation of this road that Macquarie Plains became effectively accessible, and therefore viable for settlement. At the time of painting, this was known as the 'New Road', and it is a significant improvement on the roads described by Frankland as a rough track cut by use.[377] John Glover sketched some scenes on the Derwent in 1830–31, showing a rough track in one, and a small herd of animals in single file along another (figure 51).[378] These, particularly the second, were probably typical of the earliest tracks created by the feet of thousands of humans and animals over the millennia.

Figure 51: Falls of the Derwent, 1831-32 (Glover).

The growing pastoral economy of the colony changed transport needs – sheep could be walked to market, or shorn in situ, rather than shipped, although the waterways retained

376 McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 111.

377 Frankland, *Report on the Transactions of the Survey Department*, 22; *The New Road Leading to the Northward from New Norfolk, Van Dieman's [I.e. Diemen's] Land*, c 1825, c 1825, National Library of Australia, http://nla.gov.au/nla.obj-135192169.

378 John Richardson Glover, *No. 11*, 32 1831, 32 1831, DGA *47*, State Library of NSW, http://archival-classic.sl.nsw.gov.au/album/albumView.aspx?acmsID=825808&itemID=943315.

their use for products such as wool. Nonetheless, with an increasing network of roads, the importance of direct river access was reduced. Water became a necessity for irrigation rather than transport, and in many of the open extensive plots shown at figure 52 a river or stream (often one today classified as 'intermediate') ran through the centre of the property.[379] Such a source watered both the fields and the stock, but the landholder also had complete control over his or her section, and could manipulate or divert it to better suit the needs of the farm. Crops needed a more consistent water supply than livestock, and this was reflected in farm layouts. On charts such as *Cornwall 39*, which shows part of the intermediate free long-lots near Ben Lomond, the enclosed agricultural areas are all on the banks of the Nile River, while the open grazing land is at the back, towards the hills. When these properties are shown with more accurate watercourse data, it is clear that what appears to be non-riparian land, such as John Glover's grants, are in fact well-served by several creeks, including Patterdale Creek, named after Glover's property. This creek feeds into several dams, and an enclosure on *Cornwall 39* is very closely situated to a modern centre pivot (circular) field, suggesting two hundred years of agricultural use. The same can be seen in the neighbouring Pitcairn properties, where branches of Patterdale Creek run into both modern circular fields (satellite view) and illustrated nineteenth century enclosures.[380]

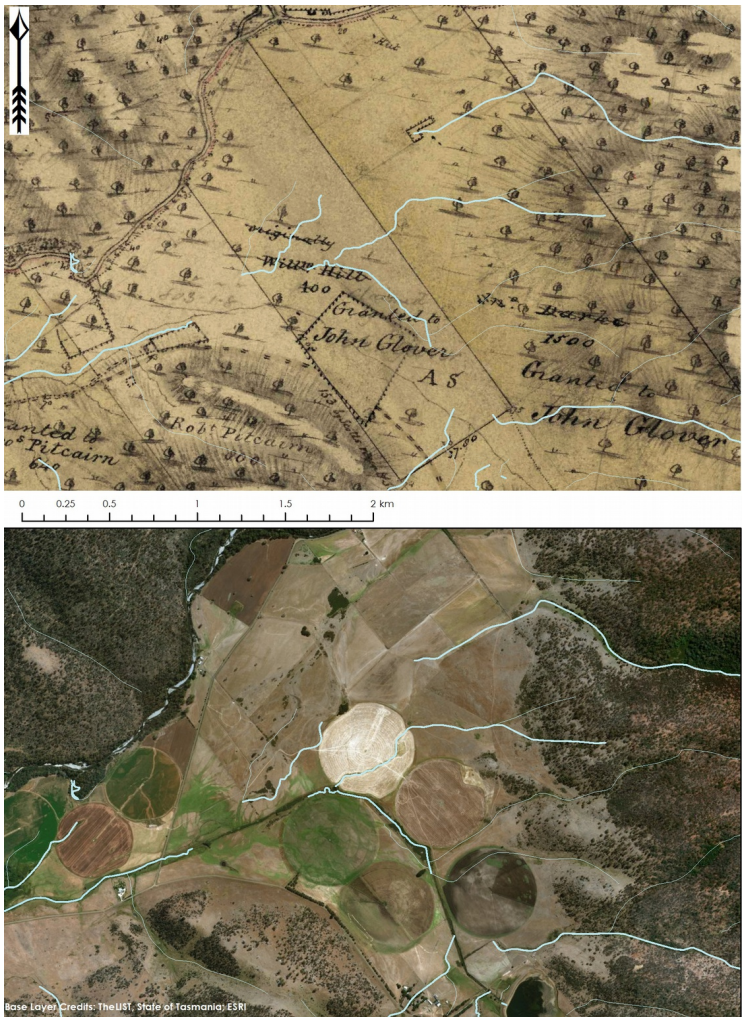

Figure 52: Glover and Pitcairn's properties, with watercourses, in 1827 and c. 2016 (Cornwall 39 / LISTmap)

[379] J.H. Wedge, *Cornwall 39: Parishes Lymington, Deddington, Ashford, and Uplands*, 1827, 1827, 39, AF 396/1/1325, TAHO, https://stors.tas.gov.au/AF396-1-1363; DPIPWE, 'LISTmap', accessed 21 February 2017, http://maps.thelist.tas.gov.au.

[380] Wedge, 'Cornwall 39'; DPIPWE, 'LISTmap'.

Although the boundaries of open extensive plots of land were not shaped by rivers, and although their locations were not dictated according to government instructions, they were still clearly shaped by the need for water access. Rather than prioritising equal water access, the era of the open extensive plot was an age of water exclusivity, as grantees and purchasers sought water they could divert to their own purposes. As will be seen, this was apparently a higher priority than soils, although all was controlled by topography.

Rainfall	Geological Period	Rock Type	Altitude	Topography	Variation
1	6	4	1	3	1
1	7	2	1	3	1
1	9	8	1	2	1
2	**6**	**4**	**2**	**4**	**1**
2	6	8	2	4	2
2	**7**	**2**	**1**	**4**	**1**
2	7	2	2	4	2
2	7	2	2	5	1
2	**7**	**3**	**1**	**2**	**2**
2	7	3	1	3	2
2	7	3	1	4	1
2	7	3	2	3	1
2	7	8	1	3	1
2	8	2	1	3	1
2	8	2	1	3	2
2	**8**	**2**	**1**	**3**	**3**
2	8	4	1	2	1
2	9	3	1	2	1
2	9	3	1	2	3
2	9	8	1	2	2
2	9	8	1	2	5
2	9	8	1	3	3
2	9	8	2	2	5
3	**7**	**2**	**2**	**4**	**1**
3	7	2	2	4	2
3	9	3	1	2	1
3	**9**	**4**	**1**	**2**	**1**
4	7	2	1	4	1
5	7	2	2	4	1

Figure 53: Soils of intermediate free and open extensive (highlighted) grants.

Of the twenty soils touched by open extensive acreages in the study areas, fourteen also feature intermediate free grants (see Chapter Four). Figure 53 shows the soils of intermediate free and open extensive, with those unique to the latter highlighted, and demonstrates that in many senses there was little variation even between some of those soils which are categorised as different. The sixth digit represents other variation, and it is here that some of the soils are distinguished from each other. Of the twenty soils making up the open extensive area studied, only three have a different combination of rainfall, geological period, rock type, altitude and topography to those on which long-lots were

predominantly located. These numbers show that the different settlement patterns were all concentrated on very similar soils. The most interesting factor is topography, with grants apparently spread across undulating plains, hills from 100 to 300 metres, and mountains (over 300 metres). However, it is crucial to remember that only a small part of the grant may be situated on a soil type, and on polycultural farms an even smaller part may have been used for the purpose to which it was best suited – using the Land Systems definitions is only intended to guide understandings about land choice, not exclusively inform it.

One of the most obvious features of the open extensive blocks is their relationship with flat lands. Cumulatively they cover a wide range of topographical types (according to the ASC), however when the grants of Bothwell are shown in relation to elevation (figure 54) it is obvious that the majority of these acreages were situated on the flatter lands, stretching into the surrounding hills. In some areas, such as Macquarie Plains, the entire region is relatively flat, particularly compared to the area of earlier settlement around the New Norfolk Township. These properties are primarily focussed on the flatter lands, although some do stretch up into the hills, hence the inclusion of hillier soils. As with *Cornwall 39*, the properties on this chart are either focussed along the sides of the River Jordan, or have access to smaller streams, lakes and dams throughout the area.

The soils do reveal one other commonality between almost all the open extensive grants – a dominant native vegetation of woodland. Woodland is classified as having sparse dominant foliage (10–30 percent), with trees ten to thirty metres tall. Some grants feature open woodland, with ten to thirty metre trees at 10 percent density. Open-forest (30–70 percent density of 10–30 metre trees) and some grass-/herb-/sedgeland (30–70 percent grass-like cover) are also occasionally seen, but nothing that is categorised as 'dense' (over 70 percent density of the dominant foliage).[381] It must also be remembered that these lands were classified nearly two hundred years after the arrival of the British. With the associated cessation of intentional fire management came the expansion of forests, as seedlings were permitted to grow (see Chapter Six). Therefore what may now be categorised as 'mid-dense' could well have been less wooded when these areas were alienated in the 1820s. The pre-European vegetation chart supports this argument, showing the majority of open

[381] *Land Systems of Tasmania: Region 5* (Hobart: Tasmanian Department of Agriculture, 1986), 33.

extensive grants focussed on areas of eucalypt forests (10–30 metres tall) and tussock grasslands (figure 54).

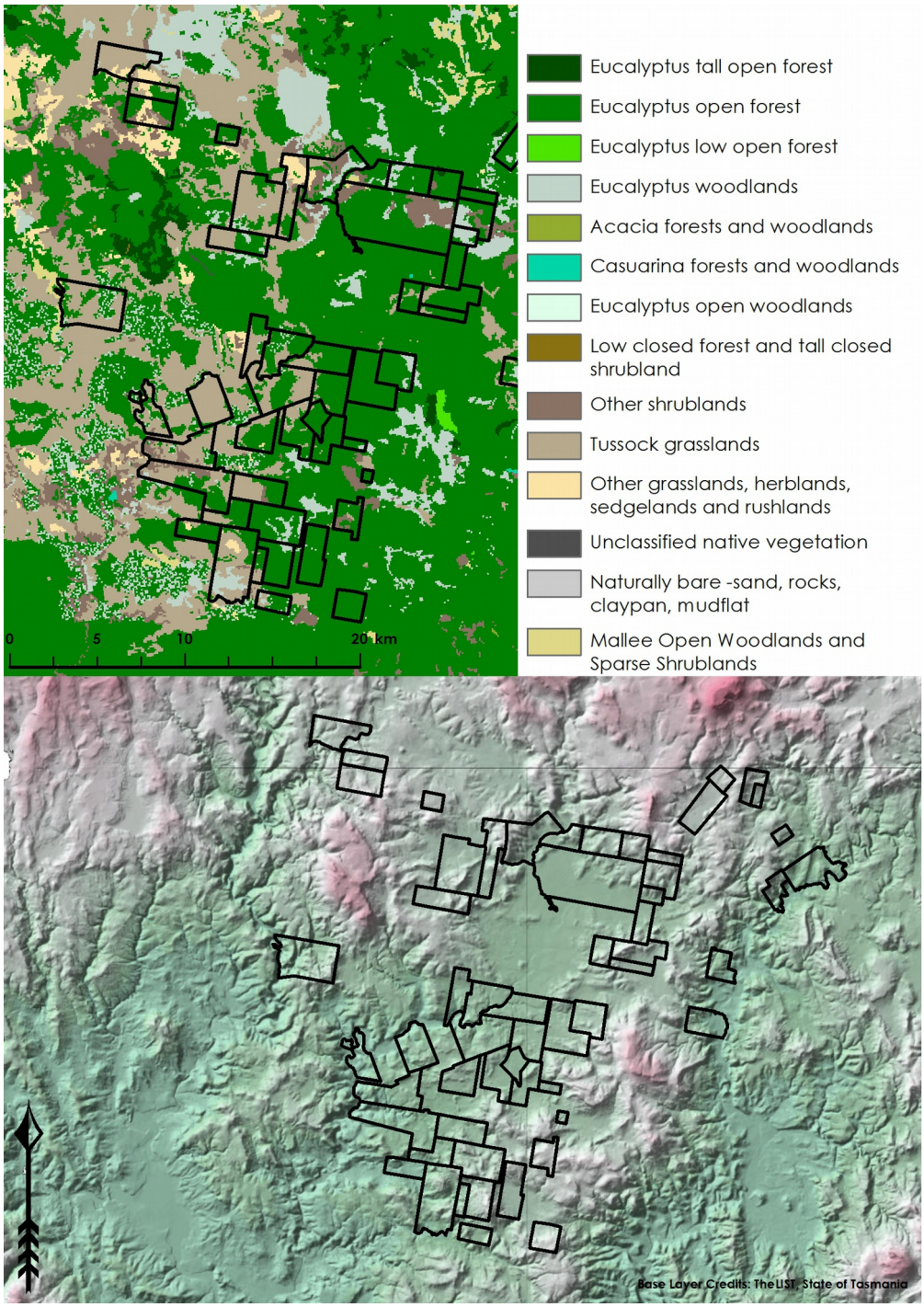

Figure 54: Open extensive grants in Bothwell (to 1830), over the pre-European vegetation chart (top) and hillshade (bottom) (ASC / LISTmap).

To draw these elements together, what new land grantees sought were flatter lands, with minimal tree coverage and a water supply. When settlers wrote complaints about the lack of land, they did not mean that literally every acre had been alienated by the British, but instead those dominated by 'plains' and 'open woodlands', as they described them.

As with the riverine intensive grants, these lands were easier to work and therefore more desirable. They required less clearing, and could therefore be put into more immediate use, and are less susceptible to erosion than the hills. Vast areas of these open extensive grants are still under grazing today, demonstrating their ongoing suitability. Nonetheless, there are inherent environmental dangers, such as drought and flooding, that continue to affect those working on these lands today.

In September 1826, the *Colonial Times and Tasmanian Advertiser* expressed concern that the 'farming operations are very backward this season', as the wheat had not yet been sown in many places and the possibility of a summer drought would then severely affect the colony's ability to feed itself.[382] Unfortunately, as Evans' research has shown, 'all or most of' 1827 was plagued with drought in the south.[383] However, it is not possible to segregate drought and flood by seasons – both are possible in summer and winter. In fact, drought can then lead to flood, as the parched land is incapable of absorbing heavy rain. In June of 1826, the same paper was concerned that, where the previous year the land had been flooded, this year the lack of rain was stopping the ploughing and planting of the land.[384] Articles such as this were not uncommon, as the British struggled to comprehend the changeable weather of Tasmania. In 1821 the *Hobart Town Gazette* had been asked to provide an account for the shortages of animal food over the winter. The response suggests that the real concern was the onset of a corresponding meat shortage.[385] A chain of reasons was given for the shortage: indiscriminate slaughter to respond to a 'great pressure' in New South Wales, the increase in population and growing interest in stock keeping, the loss of Crown lands associated with settler expansion over them, and the subsequent sale of the small flocks kept on those unlocated lands to larger stock-keepers without any obligation to take them to market. The inaccessability of the best feeding grounds could also be a problem during the winter months, the *Hobart Town Gazette* supposing this was compounded by the other explanations. As discussed in Chapter Four, agriculturalists were instructed to avoid low land pasturage in the winter, its high nutritional value was not worth the risk of flooding and stock foot-rot.[386]

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382 *Colonial Times and Tasmanian Advertiser*, 29 September 1826, http://nla.gov.au/nla.news-page679153.
383 Appendix 3, Evans, '"Antipodean England"?', 469.
384 'Rain', *Colonial Times*, 15 June 1827.
385 *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 20 October 1821, http://nla.gov.au/nla.news-article1089561.
386 20 July 1816, 1.

Stock theft was also a concern. Many bushrangers were active in the 1820s, as well as absconders and people of the Nine Nations. While flood and drought were environmental risks that continued through the riverine intensive to this open extensive stage, human depredations posed a much larger danger in this latter stage. This was largely because of the shift from tightly laid out plots, which automatically created some form of neighbourhood watch, to more isolated 'island' settlements surrounded by Crown land. As observed at the beginning of this chapter, there was a perceptible transition from valuing neighbours to prioritising room for expansion. This was not because the dangers of the unfamiliar island had been removed, but because human desire for wealth and success was stronger than caution. This disregard of the inherent security provided by the long-lot pattern left tangible traces in the landscape, and arguably contributed to some of the accusations levelled against surveyors.

Irrigation or transportation?

Would the settlers have chosen land by a water highway if it had been available, or did they find smaller waterways preferable? Settlements generally moved through the stages, from a long-lot to an open extensive plan. Some, such as New Norfolk, started at the riverine intensive, with a small intermediate stage of intermediate free, before moving into open extensive on the hinterland plains away from the Derwent River. Others, such as Bothwell, which were not established as emancipist settlements, started with the larger riparian intermediate free properties, then expanded to open extensive from there. The result was that by the open extensive stage, the majority of river-edge land in these settlements had been claimed. The settlers had no choice but to move into the interior. This land was arguably better suited for their purposes anyway, when some of the dangers of the riverine land are considered.

While flooding could wash away crops, the waters could also replenish the nutrients in the soils. For many of those living in these areas the benefits outweighed the damage. As discussed in Chapter Four, this infuriated the governing bodies who saw settlements such as those on the Hawkesbury-Nepean washed away time and time again.[387] There was also an almost aggressive shunning of colonial oversight in these settlements, which were often

[387] King to Camden, 7 April 1806, HRA I (v), 697–98.

made up of former convicts and their families. Pride and the luxury of freedom were worth more than the cost of flooding.[388] These were not priorities for the free emigrant, who came to the colony aspiring to wealth. This meant that the risk of crop loss was of higher significance, as it was countered only by the possibility of increased soil fertility – the desire to escape bureaucratic oversight was particular to emancipists. Crop destruction meant potential starvation for a small landholder, and possibly also the colony if enough government suppliers were affected. For those seeking their fortune, it could be a severe setback to their ambitions, but rarely did those settlers keep all their eggs in one basket (or wheat in one field in this case). It may seem callous to differentiate them in this way, but in 1806, when the Hawkesbury settlement was flooded, reducing the supply of grain to Van Diemen's Land, the government of the latter ordered the use of 'every exertion in Sowing the whole of the Public Grounds at New Town with wheat'.[389] The colonial government sought to avoid starvation, but wealthy landholders could not rely on similar assistance in preventing bankruptcy.

Nonetheless, as the intermediate free acreages demonstrate, the riparian land was still highly valued by free emigrants. Rich soils and good transportation remained desirable attributes, particularly when the settlement was only new and without reliable overland access. The charts show, however that many of these properties gained extra acres, forming tight groups held by one family, sometimes within oddly shaped boundaries. The settlers who got in early often had the means and opportunity to claim both riparian and interior lands. This is not to say that the lands taken by open extensive were inferior, just that they were different. The hills and plains of Tasmania are interwoven with rivulets and creeks, and a watercourse running through a property could be manipulated to suit the landholder's needs, thus giving more control over irrigation and water power. The traces of irrigation

Figure 55: Undated drainage ditch at historic property of Woolmers, near Norfolk Plains (Imogen Wegman, 2016).

[388] Karskens, *The Colony*, 128–29.
[389] General Orders, 19 May 1806, HRA III (i), 541.

channels carved into the landscape survive to this day, some reinforced with bricks and stone, others lined with the remnants of hawthorn hedges (figure 55).[390]

It was not only watercourses that were adjusted within property boundaries. Terry's mill race on the Lachlan River in New Norfolk, influenced the entire landscape by constructing a 2000 yard-long diversion from the Lachlan to power his mill. The success of this venture was seen in 1834 when the travelling Quakers, Backhouse and Walker, noted that Terry's mill was still operational, despite the drought that prevented others from operating their own machinery. The ultimate purpose of Terry's mill was to serve the local community (while also earning Terry an income), so despite the community complaints about his monopoly on the water flow, perhaps this action was more acceptable because of the public good. If a farmer had diverted an entire river away from the land of other farmers, simply to water his sheep, one suspects the opposition would have been more vehement.

Conclusion

In the end, the differences in settlement patterns between Van Diemen's Land and New South Wales come down to the land itself. Tasmania may appear to be only small, but it fits a lot of hills and mountains into its 68,000 square kilometres. By rejecting a rectilinear pattern, the settlers and surveyors on this island allowed the landscape to shape them, as they sought to shape it. They saw the landscape as blank, but the patterns they laid down were influenced by thousands of years of cultivation that preceded them. As the following chapter discuss, they were attracted to the same pastoral lands as the Tasmanian Aborigines, and the consequential hostilities that arose continued to influence European land use.

The open extensive pattern was messier than its preceding riverine intensive and intermediate free forms, and it was reliant on an abundance of space found only in newly occupied colonies. One of Australia's defining features is still wide open space, and yet this pattern was an aberration from the rectilinear layout established in the New South Wales colony.

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[390] See Chapter 1 in Mason-Cox, *Lifeblood of a Colony*, 3–44.

This chapter has explored the circumstances of Van Diemen's Land that enabled the implementation of an open extensive pattern that differed significantly from its contemporary mainland equivalent. Free emigrants came to the Australian colonies from the land-poor Britain, and were able to establish themselves with very large landholdings in the south-east of the continent. It took time for regulations and procedure to catch up to increased demand, although by the 1820s the colonial government shut emancipists out of the market by imposing wealth and size conditions on new grants. In Van Diemen's Land we see a shift away from river-edges as the land along the major rivers was alienated. Instead, grantees and purchasers moved inland, where they could claim an area that contained a stream or rivulet. Rather than relying on rivers for transportation, they turned their eyes towards irrigation and security – the risk of flooding and associated crop loss or flock foot-rot outweighed the need for ready access to a water-highway. These interior acreages initially provided the opportunity to spread out beyond the boundaries of the grant, into the surrounding Crown land. Choosing these lands was a strategic decision by the settlers, who prioritised (in principle at least) a wealth of land over the risks from the indigenous people within the settled districts.

Open extensive grants were still principally located on flat lands. Soils and modern vegetation support the long-accepted theory that European settlers were attracted to open land where they could commence farming with very little preparation. This settlement pattern was a product of monocultural farming, and was only possible because wealthy settlers could receive several parcels of land that would suit different needs. While riverine intensive plots were expected to serve all the needs of a family, open extensive was a direct result of settlers seeking wealth beyond survival.

Chapter Six:
Mosaic

In 1810, the explorer John Oxley described the lands around Port Dalrymple, now known as the Tamar Valley. His writing captured the priorities of the British. He described the quality of the soils and progress of agriculture, while identifying areas of potential for future development. Not only did his words foreshadow the coming expansion, but they also inadvertently captured elements of Aboriginal land management practices.[391] Just like most of *Trouwunna* (one Tasmanian Aboriginal name for the island), the Tamar Valley was a working landscape long before the arrival of the British. When Oxley noted that '…the Grounds being in a great measure unencumbered with Wood…', he recorded the results of systematic firing to clear areas for pasture and hunting. The land near the coast was 'very heavily wooded', but only a few miles inland he was surprised by the change in the country: 'never did the Eye behold more beautiful prospects or apparently more fertile land'. This land could be prepared for cultivation at five times the speed of the country he had previously encountered in New South Wales.[392] Lieutenant John Bowen wrote similar descriptions of the Derwent River in 1803. He said the 'Banks are more like a Nobleman's Park in England than an uncultivated Country… very little trouble might clear every Valley I have seen in a Month…'[393]

Nor was this attitude confined to Van Diemen's Land. Despite Oxley's favourable comparison of Port Dalrymple with the area around Port Jackson, these park-like ground were observed throughout that colony as well. James Cook, Joseph Banks and Sydney Parkinson, aboard the Endeavour in 1770, all recorded that parts of the land on Australia's east coast were so 'free from underwood', they it could easily be cultivated, that the land resembled 'plantations in a gentleman's park.'[394] Bill Gammage devoted twelve pages to these written impressions, from all across the Australian continent, demonstrating the continuity of cleared lands.[395]

British decisions were clearly informed by the landscape they encountered on arrival. They were drawn to these areas of open land, acreages apparently prepared for immediate cultivation with British seeds and grazing stock. The hypothesis here is that the Tasmanian Aboriginal people and British settlers were attracted to the same lands, and put them to

391 Lyndall Ryan names the *leterremairrener*, *panniher*, and *tyerrernotepanner* nations in this area, but notes that there were probably two others whose names have been lost. *Tasmanian Aborigines*, 19.
392 J. Oxley, Remarks on the Settlement of Port Dalrymple, HRA III (i), 759–61.
393 Lieutenant Bowen to Governor King, 20 September 1803, 197–98.
394 Cited in Gammage, *The Biggest Estate on Earth*, 5.
395 5–17.

very similar uses. This chapter does not seek to create new understandings of Aboriginal land management. Rather it draws on existing research to create an image of the 1803 landscape, over which British settlement patterns were laid. This chapter argues that historians can uncover pre-European land use by combining three points of importance. The first point is understanding that both groups of occupants used cleared land to maintain stock (although the techniques were different). The second point is that this common usage corresponds with the knowledge that the British were likely to alienate these areas early. Finally, by identifying the specific locations first alienated within an area, it is therefore possible to infer which areas had undergone extensive pre-European fire-stick farming.

Starting with an overview of modern understandings of Aboriginal fire-stick farming, this chapter considers the evidence of the Europeans who witnessed the firing of the country, before examining two case studies. These highlight the benefits of using HGIS to explore changing land use, particularly when other conventional forms of evidence are lacking. The first case study focuses on the area between Ben Lomond and Epping Forest in the north of the state, a region with a rich coverage of colonial-era charts, artwork and written descriptions. Analysis of these sources uncovers new details of the relationship between European land choices and Aboriginal land use. The use of traditional sources in this way is an accepted methodology, albeit one that relies on the creation and survival of such documents. A landscape history approach enables the historian to use additional forms of environmental evidence, including soil types, topographies and archaeology, to tell the story of those regions which are lacking in charts, maps, journals or other documentation. The second case study illustrates the power of these methods by examining the settlement of New Norfolk. The landscape of this area was not favoured by artists and was given only cursory attention in journals and charts. By incorporating the environmental factors and settlement patterns already discussed, a more complete image of the land and the people living on it emerges.

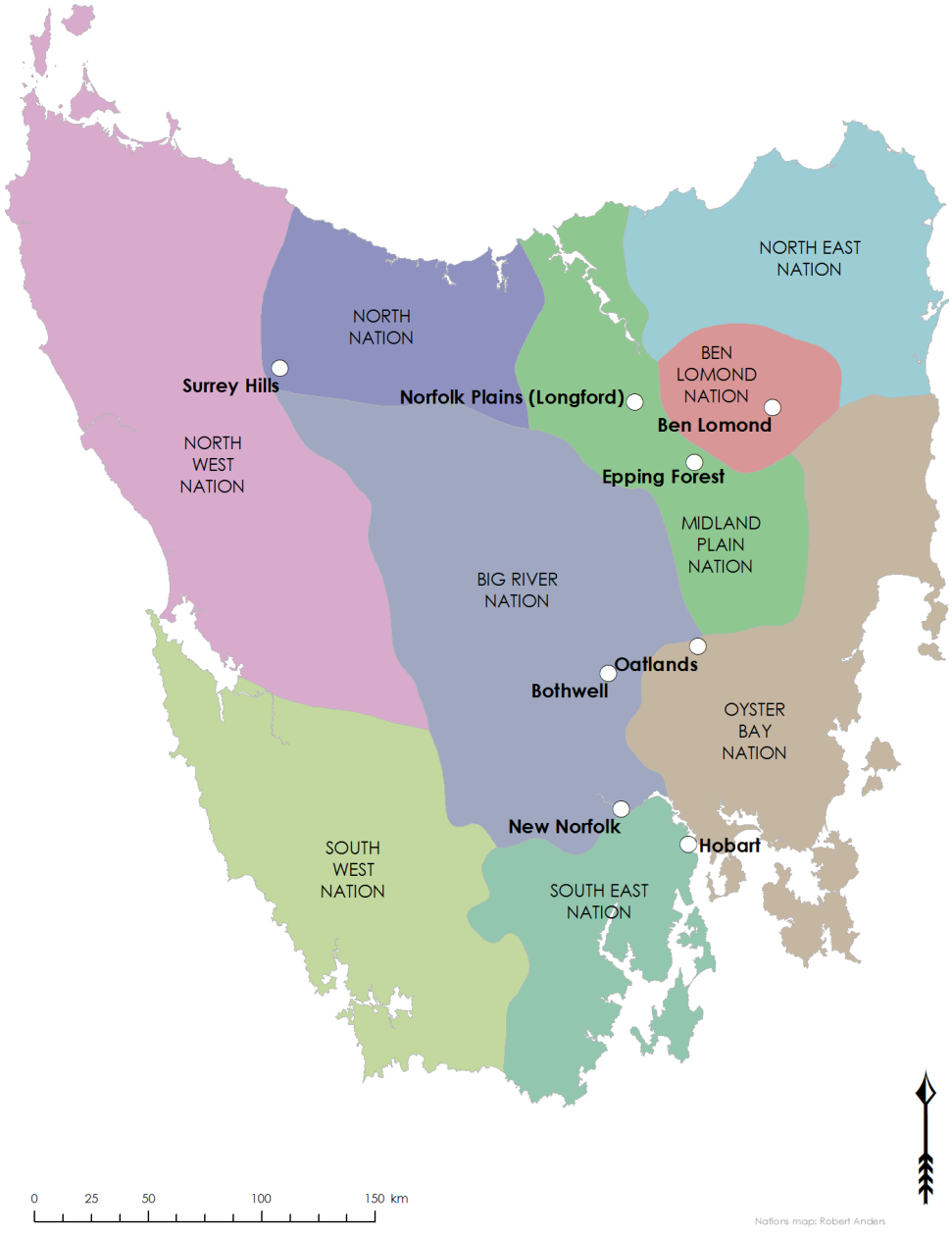

Figure 56: Locations discussed (Nations map: Robert Anders).

Fire-stick farming

Theories of fire-stick farming have always been controversial. For evidence they rely on oral histories, colonists' accounts, and analysis of vegetation types over time. A particular problem with the latter is that it has undergone change in the two centuries following European settlement. The use of fire in Aboriginal land care has long been of interest to

historians, since Rhys Jones first wrote about it in 1969, coining the phrase 'fire-stick farming' to describe the use of fire to actively manage and maintain the land and its resources.[396] The 1980s saw focus shift to analysis of the botanical and archaeological data. Some researchers, such as Horton, argued that pollen samples showed no evidence of 30,000 years of selective burning. Horton argued that Aborigines had no need to use fire, and disagreed with those saying that biological evidence (pollen, ash samples, etc) proved the effects of fire-stick farming. Such arguments were based on what he saw to be a false premise – that fire-stick farming was a proven. This 'circular argument' did not convince Horton, who did not find a compelling case that fire was used as a deliberate land management tool. He attributed bushfires to lightning strikes, rather than human influence.[397] His argument was quickly disputed, as plant ecologists Bowman and Brown demonstrated that in Tasmania there was evidence of fire that must have been intentionally lit, having gone through areas with very low lightning rates.[398] They argued that selective human firing of the landscape created a pattern of 'anthropogenic fire mosaics' that formed a crucial part in the biodiversity of Australia.[399]

It is currently widely accepted that fire was used intentionally before the arrival of the British, as a means of adapting vegetation to create habitats that suited particular animals, although the details remained contentious. In 2011, Bill Gammage published his theory that all of Australia was managed as an 'estate' using fire, with techniques adapted to manage the different vegetation and climates across the continent, all with the same goal – to work the land.[400] The result was a pattern of 'lightly wooded areas interspersed with grassland'. The small patches of scrub created shelters for birds and animals, while the fire rejuvenated many grasses and trees with fresh growth that would feed many of the animals, and provide both food and other resources for the people living in the area. As different plants respond differently to fire and require variable conditions to burn, this mosaic pattern also created self-reinforcing fire boundaries – a conflagration would slow or stop at

396 Jones, 'Fire-Stick Farming'.
397 Horton, 'The Burning Question'.
398 D. M. J. S. Bowman and M. J. Brown, 'Bushfires in Tasmania: A Botanical Approach to Anthropological Questions', *Archaeology in Oceania* 21, no. 3 (1986): 166–171.
399 R. Bliege Bird et al., 'The "Fire Stick Farming" Hypothesis: Australian Aboriginal Foraging Strategies, Biodiversity, and Anthropogenic Fire Mosaics', *Proceedings of the National Academy of Sciences* 105, no. 39 (2008): 14796–801.
400 Gammage, *The Biggest Estate on Earth*.

the edge of a template.[401] Fire would also remove small saplings, leaving the plains the Europeans revelled in. These areas were cleared specifically for hunting and cultural practices, as well as to create clear routes for travel through the land. Burning was planned well in advance, and Patsy Cameron has suggested it was a role overseen by high status members of the clans and that fire had ceremonial, as well as practical, significance.[402] This 'mosaic farming' left visible traces in the landscape that, Gammage argued, could not have been caused by anything other than long-term intentional use of fires.

These remnant landscapes are still visible today, often as patches of clear land surrounded by woodlands. Gammage used many illustrations, including two of Goderich and Gatcomb Plains on land that was granted to the Van Diemen's Land Company in the 1820s. In his examples, using aerial photography from 1949 and 1984, cleared areas are very obvious, and are still visible in more recent aerial photography.[403] The State Orthophoto basemap from LISTmap shows this area, and Gatcomb Plain is easily distinguished from the surrounding cultivated land. This area, Gammage suggests, was particularly effective for funnelling hot fires, and formed a deadly trap for prey that would be driven to the swampy edge of the Wandle River where they would be killed with clubs and spears.[404]

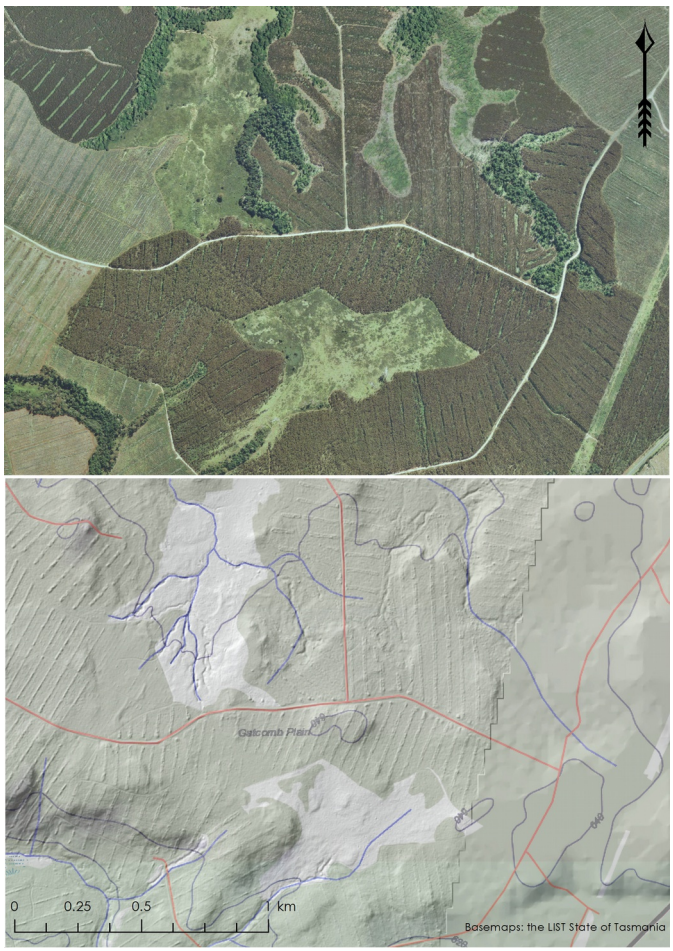

Figure 57: Gatcomb Plain, centre bottom (LISTmap).

401 R.A. Bradstock, R.J. Williams, and A.M. Gill, *Flammable Australia: Fire Regimes, Biodiversity and Ecosystems in a Changing World*, ERA Collection (CSIRO Publishing, 2012), 208.
402 Cameron, *Grease and Ochre: The Blending of Two Cultures at the Colonial Sea Frontier*, 10; 36-40.
403 Gammage, *The Biggest Estate on Earth*, 81.
404 Gammage, 80–82.

The principles Gammage discusses are generally supported by historians, ecologists and archaeologists, but he has been criticised for being too general in his application of them. One reviewer criticised Gammage for homogenising Aboriginal history, expressing scepticism about his theories of continental connectivity.[405] Another proposed alternative explanations for some of Gammage's case studies, drawing on other research and professional experience.[406] Nonetheless, only the most scathing reviews entirely rejected his thesis, but even they still acknowledged that his 'exhaustive recording' of evidence has made a qualitative contribution to discussion about fire-stick farming.[407] Most recently, in 2016, Fred Cahir and others critically surveyed the literature on the use of fire in Victoria. They advised their readers that individual areas needed more research, while cautiously accepting the broad sweep of Gammage's assertions.[408] This chapter accepts Gammage's central claim that the vegetation of Tasmania was significantly transformed by Aboriginal firing regimes. The following seeks to add another layer of understanding by creating a framework with which to attempt some retrospective analysis of British settlement patterns to identify pre-European landscapes and usage. It is not intended to be a comprehensive discussion, but to open the conversation for the more detailed local analysis along the same lines advocated by Cahir.

Gammage's proposition of a widespread fire-managed 'estate' may be too general, but there is certainly evidence that 'fire-stick' or 'mosaic' farming was practised across Tasmania. More recently there have been empirical attempts to quantify the effects of fire-stick farming in Tasmania. Researchers, such as Onfray and Stockton, have looked at specific areas on the north-west coast, using John Hellyer's diaries of explorations into the area as guides. Both concluded that there were areas that had unexpected vegetation, and flora changes that could not be explained by soils or other environmental factors. Bowman and others demonstrated that in the two-hundred years since the European arrival there are at least two parts of Tasmania (Surrey Hills in the north-west and Paradise Plains in the north-east) that have seen a reduction in grassy plains, and increase in wooded country.

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405 Ian Keen, 'Review: Bill Gammage, The Biggest Estate on Earth: How Aborigines Made Australia', *Economic History Society of Australia and New Zealand* 54, no. 1 (2014): 86–89.

406 Adam Leavesley, 'Review of "The Biggest Estate on Earth – How Aborigines Made Australia"', *Ecological Management and Restoration* 13, no. 2 (May 2012): 4–5.

407 Keen, 'Review: The Biggest Estate on Earth', 86.

408 Fred Cahir et al., 'Winda Lingo Parugoneit or Why Set the Bush [On] Fire? Fire and Victorian Aboriginal People on the Colonial Frontier', *Australian Historical Studies* 47, no. 2 (3 May 2016): 225–40.

Together, these three researchers build a compelling image of the difference regular firing could make to the Tasmanian landscape.[409]

Prior to the arrival of the British, the island had been observed by other explorers. In 1642 Abel Tasman described the unseen inhabitants of 'Anthoonij van Diemenslandt' as 'people of extraordinary stature', after measuring cuts made in trees for climbing. From both the ship and the land, his party saw smoke from fires, and noticed land that had been 'worked by hand and baked hard as flint by fires.'[410] Tasman's description might be better described as scientific interest rather than colonial judgment, recording the observations and speculation of himself and his company. As exploration continued in the late eighteenth century, discussion shifted from speculative to assumptive. Enlightenment ideas of the 'noble savage' influenced opinion, as did later hardening of attitudes to race, especially those that justified European occupation of lands on the basis of cultural superiority. A good example of this is maps that routinely hide indigenous occupation (or even presence).

There is evidence, however, that the British were aware that Aboriginal people used fire intentionally, although they did not understand the complexity of fire management, attributing an artless simplicity to it. Explorer Edward John Eyre, in South Australia in 1839, described fired landscapes as 'purposely or accidentally lighted by the natives in their wanderings' for example.[411] To acknowledge systematic intent would have been to grant more sophistication to the people of the area than the enlightenment image of the 'noble savage', or subsequent nineteenth-century views of Indigenous peoples and culture, would permit. Acknowledgment of indigenous land management practices would have also undermined the philosophical assumptions that underpinned the British seizure of the continent. Their claim was based on the principle that the owners of land were those who cultivated and improved it. The foundation for this argument was laid by John Locke in the seventeenth century, when he proposed that 'the earth, and all inferior creatures be common to all men', but that land became the property of an individual when he 'removes

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409 Jim Stockton, 'Fires by the Seaside: Historic Vegetation Changes in Northwestern Tasmania', in *Papers and Proceedings of the Royal Society of Tasmania*, vol. 116, 1982, 53–66; Robert Onfray, 'Cultural Artefacts or "neglected Old Parks": The Colonization of Rainforests in North-Western Tasmania', *Australian Forest History Society*, 2012; D. M. J. S. Bowman et al., 'Contracting Tasmanian Montane Grasslands within a Forest Matrix Is Consistent with Cessation of Aboriginal Fire Management', *Austral Ecology* 38, no. 6 (1 September 2013): 627–38.

410 2 December 1642, Tasman, 'Abel Tasman's Journal'.

411 Quoted in Gammage, *The Biggest Estate on Earth*, 10.

it out of the the state that nature hath provided…[and] mixed his labour with, and joined to it something that is his own…'[412] The methods by which Australian Aborigines adapted the landscape to their needs were not recognised, or were willfully ignored, thus giving Britain a legal foundation for its claim to the continent.[413]

Beginning with Tasman, basic uses of fire were attributed to the Tasmanian Aborigines. They were supposed by Europeans to be used for defence, cooking, and warmth.[414] The underlying assumption was that smoke indicated an Aboriginal presence. When G.P. Harris first explored the Huon River in 1804, he reported an absence of smoke or traces of fire, perceived as an abnormality even in these early days of the settlement. He concluded that the land there was not suitable for habitation.[415] These early explorers knew that the fires were not always naturally starting, hesitantly attributing their existence to 'the natives', or following a distorted version of the adage 'absence of evidence is evidence of absence'. An absence of smoke or fires (or the aftermath) indicted an absence of people in that area.

Whether they believed the Aboriginal Tasmanians could make fire, or only continue its use once ignited by lightning is unclear. Shayne Breen tracked the arguments of scientists, historians and archaeologists through the nineteenth and twentieth centuries, as they struggled to establish whether the indigenous inhabitants were capable of starting fire. George Augustus Robinson made a comment that suggested they were not able to. Breen suggested this evidence was interpreted too broadly by subsequent researchers and informed a century of misinformation. In other instances, however, Robinson observed the Bruny Island inhabitants using a stone to strike a fire. Breen concluded that the vast array of uses for fire across the island attests to the mastery the occupants had over the technology. It is now widely accepted that they were able to start fires intentionally, and

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412 Locke also argued that man should take only as much as he was able to work, 'beyond this is more than his share, and belongs to others.' While happy to claim possession over the land under these principles, the settlers in Van Diemen's Land were equally happy to ignore ideas that might have limited their allowances. William Uzgalis, 'John Locke', ed. Edward N. Zalta, *The Stanford Encyclopedia of Philosophy*, n.d., https://plato.stanford.edu/archives/spr2016/entries/locke/; Locke, *Two Treatises on Government*, 209–30.

413 Reynolds, *A History of Tasmania*, 33.

414 Tardif, *John Bowen's Hobart: The Beginning of European Settlement in Tasmania*, 23; Stockton, 'Fires by the Seaside', 58–59.

415 Harris, *Letters and Papers of G.P. Harris, 1803-1812*, 68–70.

that fire-sticks were a convenient way to transport fire rather than a necessity for keeping it burning once naturally ignited.[416]

There were similarities in purpose between Aboriginal and British agricultural practices, even if they looked considerably different and had varying priorities. These lands were cultivated to provide for the most basic of needs – food, water and shelter. What the British did not, however, recognise, were the nuanced uses of these lands. They had their own templates, based on crop rotations and seasonal stock requirements, but did not see the templates built over thousands of years by the traditional owners. These were areas that were cultivated to grow species of grass that would attract particular animals. Johnson and McFarlane likened these to modern day fences – 'hunters [knew] exactly where their quarry could be located when required'.[417] These same areas would be admired by the British for their pastoral potential – the same purpose, but for different animals. In other areas fire would encourage the growth of tubers and other plants for human consumption, while the British would use fire to clear the 'weeds' in order to sow consumable plants.

Case study one: a traditional approach to understanding the landscape

Using primary sources to uncover the story of settlement has long been an accepted manner of conducting historical research, but the range of sources is often limited to texts and pictorial relics. This section follows this conventional approach in an attempt to use European observations of the Van Diemonian landscape to understand the Indigenous pre-European landscape.

From the very start, surveyors explored the land, looking for potential sites of settlement. This is reflected in the charts they made of these explorations, which included information about the soils, topography and ground cover they found. James Meehan's chart of the River Derwent, drafted over 1803 and 1804, demonstrates this concern.[418] While the details he recorded reveal some of the priorities of the settlers, Meehan also unintentionally captured a picture of the pre-European landscape. The early European settlements remained tethered to the large rivers and waterways, with survey teams only venturing into

[416] Shayne Breen, 'Tasmanian Aborigines: Making Fire', vol. 39 (Papers and Proceedings: Tasmanian Historical Research Association, Tasmanian Historical Research Association, 1992), 40; Johnson and McFarlane, *Van Diemen's Land: An Aboriginal History*, 51–54.
[417] Johnson and McFarlane, *Van Diemen's Land: An Aboriginal History*, 51–52.
[418] Meehan, 'Monmouth 0'.

the more remote areas from the 1820s onwards. Even then, they focussed their explorations on areas accessible by river, creating charts such as *Exploration Chart 9*, surveyed by 'Mr Darke' in 1834.[419] This chart shows the Derwent River on one side, and the Teneriffe Marshes west of what is now the Gordon River. This chart was made as the result of several expeditions seeking the source of the Derwent River, but it was also intended to scope out potential further grazing country in the south-west.

Figure 58: Derwent River, 1834 (Darke, Exploration Chart 9).

Alan Jones recounts the hardships of these expeditions for the three men, surveyor Darke, his guide Goodwin, and the general assistant Cunningham. Hypothermia and serious burns contended with the daily difficulties of pushing through the bush and across barren summits.[420] Despite their foray into the mountains, *Exploration Chart 9* (figure 58) shows that they were still tied to the rivers. This is typical of this series of charts, the majority of

[419] The notes on this chart only say 'Mr Darke', meaning one of the brothers John or William. The archival notes attribute it to John Erskine Calder. It was probably John Charles Darke, who explored this area in 1835. Darke, *Exploration Chart 9: Derwent River*, 1834, 1834, AF395/1/21, TAHO, https://stors.tas.gov.au/AF395-1-21.

[420] Jones also attributes the entire expedition to James Goodwin, a convict who escaped from Macquarie Harbour on the west coast. He and another convict crossed through these lands, lived to the tell the tale, and his knowledge earned him the dubious honour of returning to the area as a guide. Jones, *Backsight*, 93–95.

which are focussed on exploring the river systems of Tasmania throughout the early nineteenth century.[421] The information from these charts about the pre-European landscapes, however, established an ongoing systematic bias by always placing Aboriginal occupation and activity near rivers without allowing for those landscapes that may not have been captured by Europeans. This is seen in figure 59, which shows the approximated Aboriginal camp sites of about 1800 according to data from Robinson, Plomley and Ryan.[422] The sites are gathered along the river edges, suggesting there were no campsites further inland. In reality, this only reflects archaeological examination and finds, rather than the movements of the Tasmanian Aborigines.

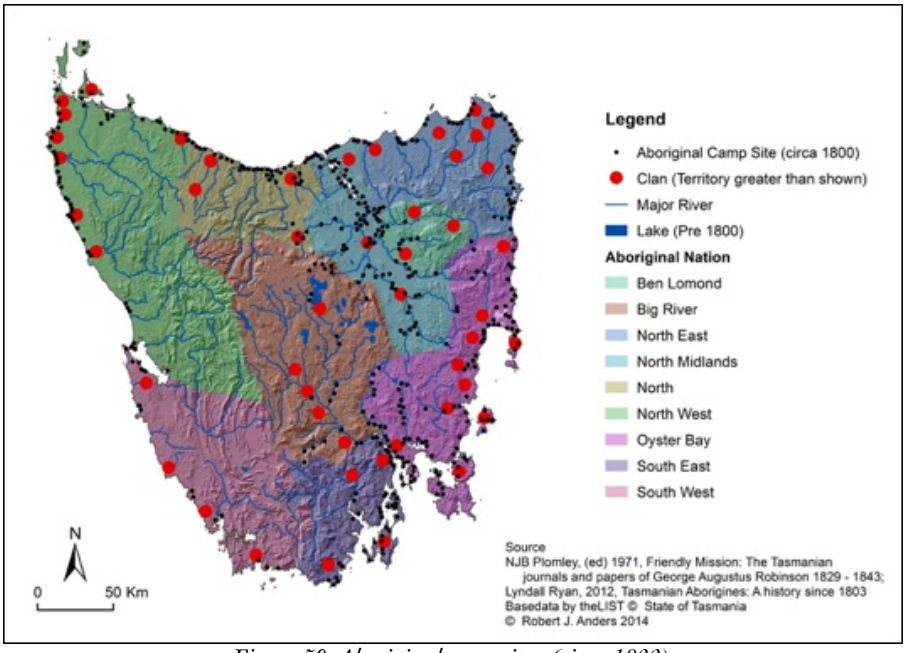

Figure 59: Aboriginal campsites (circa 1800). Note their concentration along the river edges.

There are other limitations to the charts as well. The purpose of these charts was to inform future decisions, and they reflect that. Therefore, they only show those details relevant to the government's purposes. The language used reflects British ideas of good and poor land, using words like 'barren', 'bad', 'rocky' and evaluating it in terms of potential pasturage. When Harris explored the Huon he described the soils as 'a coarse hard Clay', and determined that the combination of them and the difficult terrain made the area unsuitable for habitation.[423] This tells us a little about how land quality was interpreted by its

421 'Exploration Maps 1800–1949' n.d., AF 395, TAHO, http://search.archives.tas.gov.au/default.aspx?detail=1&type=S&id=AF395.

422 Map provided by Robert Anders, University of Tasmania.

423 It is interesting therefore that this area was colonised by emancipists and other individuals seeking to escape the oversight of the government. Today the Huon is renowned for its orchards, some of which were established with these first families in the 1830s.

Aboriginal custodians, although as will be seen, there do appear to be similarities in land use patterns both pre- and post European settlement.

Hobart 10 demonstrates the limitations of these charts. As discussed in Chapter Three this chart of the Hobart Rivulet, flowing through the city from Mt Wellington, shifts focus halfway along from recording soil quality to tree species. From the West Branch upwards, soils of varying qualities are still shown, but Harris made this chart with an understanding that the settlement would only expand so far, before the land would be used for other purposes, such as timber felling. Anyone familiar with the landscape would recognise that this shift in focus is connected to a topographical change. The Hobart Rivulet follows a relatively flat course to the River Derwent for its final few kilometres, but it starts halfway down Mount Wellington and descends much of its 700 metres before the Cascade Brewery.[424] The point at which the slope increases was a logical place for Harris to move his eyes from the ground to the foliage, but that means that this chart only records half the information for each section.

The priorities for choosing initial sites of settlement and expansion are plainly stated in many reports written for the Colonial Office and other official bodies. These were composed for a particular audience however, and while they could not outright lie about the conditions, they were sent with the knowledge that it would be at least eight months before any response was heard (by which time many obstacles had already been resolved). In 1804, at the north of the island, Lieutenant-Governor William Paterson (of the Cornwall colony) explored the banks of the South-Esk River, and wrote rapturously of their agricultural potential. He saw '…nearly three Miles in length…along the Banks of the River, where Thousands of Acres may be ploughed without falling a Tree.' This area would be chosen for the site of one of the Norfolk Islander settlements, and Paterson's excitement about them shows that cleared land was important from the very early years of the colony. In 1806 Lieutenant-Governor Collins (of the Buckingham colony) explored above the Plenty Rapids, again describing 'very fine and open Country', with 'extensive Plains'.[425]

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[424] The Hobart Rivulet is 9.5 kilometres long, and the Cascade Brewery sits approximately 100 metres above sea level. Inspiring Place Pty Ltd, 'Hobart Rivulet Park Strategic Master Plan', Final Master Plan (Hobart: Hobart City Council, 17 August 2011), 1, http://www.hobartcity.com.au/Publications/Strategies_and_Plans/Hobart_Rivulet_Park_Strategic_Master_Plan.

[425] Paterson to King, 27 December 1804; Collins to King, 27 January 1806 HRA III (i), 616–7; 355.

Like Meehan, he shows very little interest in the land below these plains, and no report of their exploration appears to have been sent to the Governor in New South Wales.[426]

When the evidence of charts is combined with artwork, other reports, and modern observations, a more detailed illustration of the landscape before and after British arrival can be created. The region of the Ben Lomond Nation can be used to provide an excellent demonstration of this.

Lyndall Ryan's important work on Tasmania understood there to be (probably) four clans within this area, three named by Plomley – the *plangermairreenner*, the *plindermairhemener* and the *tonenerweenerlar*, all of which were highly mobile, and had various rights to forage, hunt and winter in other Nations. The land around Ben Lomond was used as a summer camp, for an estimated 150 and 200 people. Ryan notes this nation was 'virtually destroyed' by the expansion of the British into the area in the 1820s.[427]

On the eighth of November, 1827 the Land Commissioners rode through this area, evaluating the land. They described the country as consisting of

> Plains…very similar to the Salt Pan Plains. The Soil red, and covered with Stones, affording excellent Sheep Pasture, if stocked lightly. The Hills at the back are also good for a short distance.[428]

Exactly one month later, surveyor John Helder Wedge charted the Break O'Day Plains, east of Ben Lomond. The boundary for the Ben Lomond, North East and Oyster Bay Nations is thought to have lain here. Parts of this region had been alienated for several years, with some landholders claiming large quantities of land for their stock. Stepping out of his tent in the evening to stretch his legs, he saw a fire, his description so evocative it is worth repeating here in full:

> My attention was at once fixed on a most magnificent and imposing sight – The hills for a few miles (about 3) were on fire, and had been for several days, but being fanne'd up by the gusts of wind it had this night blazed up to an unusual extent – a range of Hills five to six Miles in extent were burning – the general blaze was obscured by the intervening trees, but here and there a streak of fire was to be seen, formed the edge of the hills, and now and then a flare of fire

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426 The HRA. include explorations of the Derwent River to Herdsman's Cove (ibid.), and above New Norfolk, but nothing in between. No other reports have been found.

427 Ryan, *Tasmanian Aborigines*, 32–34.

428 McKay, *Journals of the Land Commissioners for Van Diemen's Land, 1826-28*, 66.

> would burst through the volumes of dense smoke and appear above the tops of the trees occasionally – the falling of the trees would [illegible] upon the general stillness, and convey to mind the destruction the devouring element was making – I should conceive the conflagration of an extensive city would present much such another appearance – But I had the satisfaction of contemplating and enjoying its truly sublime appearance without having to contemplate the ruin, perhaps excruciating death of some of my fellow creatures.

In the margin he noted 'The natives had set the grass on fire, as is their custom, whilst hunting, and it had spread in the way described – whilst in the neighbourhood they speared upwards of a dozen of Mr. Talbott's sheep and chased his shepherds.'[429]

Although the specific location the fires is not known, he was probably looking west towards the mountains around Ben Lomond – Talbott had properties in Fingal, on the eastern side of the mountain at the edge of the Oyster Bay Nation. This entry reveals that in 1827 fire was still being used to manage this landscape, although probably in diminishing amounts with the encroachment of the British and accompanying demise of the clans.

Ben Lomond was a popular subject of sketches and paintings throughout the nineteenth century, and the changing landscape was captured. Thomas Scott's 1823 sketch *Ben Lomond from Fletchers Hutt* (south-west of the mountain see figure 60), shows trees scattered through an open area. Their branches spread out wide, suggesting they did not have to compete upwards for light as they grew – they were able to stretch out into space around. The land in this area had been opened for settlement for only a year or two. These trees, however, had been growing in a cleared environment since long before the arrival of the British.[430] Joseph Lycett's similarly situated 1824 painting *Ben Lomond from Arnolds Heights* (today part of St Paul's Sugarloaf, directly south of Ben Lomond) supports this image of a mountain

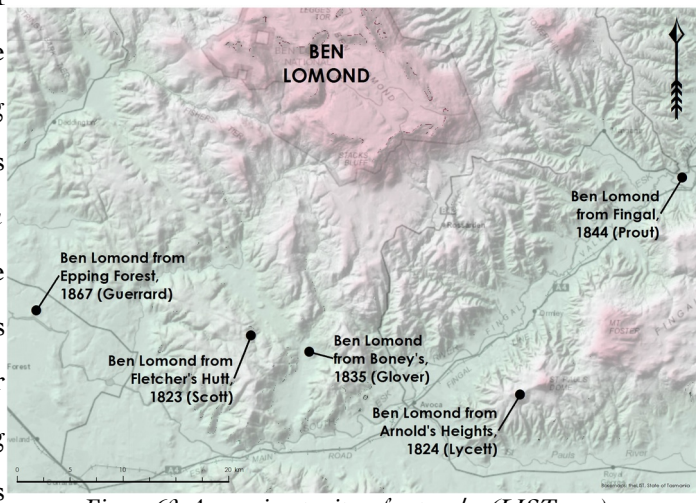

Figure 60: Approximate sites of artworks (LISTmap).

[429] Wedge, *The Diaries of John Helder Wedge, 1824-1835*, 40.

[430] Thomas Scott, *Ben Lomond from Fletchers Hutt*, 1823, 1823, PXB 216, State Library of NSW, http://acmssearch.sl.nsw.gov.au/search/itemLargeCopyright.cgi?itemID=1282531&size=full&album=1&collection=824042&parent=423959.

surrounded by plains. Here we see straight edges of trees as the slopes start to rise, forming wide green plains with a river running through. Although somewhat stylised (or possibly painted from someone else's work rather than the site itself), this painting shows the same qualities of a 'nobleman's park' as Scott's sketch, and was taken from a vantage point not far east of Scott's.[431] Wedge associated the fire with hunting, although he did not have the knowledge to note whether it was intended to drive out prey, prepare the land for future use, or intimidate the British moving around the area. Nonetheless, both the written and visual evidence show that this area was being fire-stick farmed. Other artists captured this landscape as well – Glover from Bonney's Plains, while a little further east Prout took the view from Fingal, and Guerrard painted what he saw from the western located Epping Forest.[432] All show a cultivated landscape, with sharply defined edges of trees and plains, and trees growing with hearty enthusiasm into the space around them.

Figure 61: Ben Lomond from Fletcher's Hutt, 1823 (Scott).

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431 Joseph Lycett, *Ben Lomond, from Arnold's Heights, a Part of Tasman's Peak, Van Diemens Land*, 1824, 1824, Tasmanian Archives and Heritage Office, https://stors.tas.gov.au/AUTAS001124073248w800.

432 John Richardson Glover, *Benn [I.e. Ben] Lomond from Boney's*, 1835, 1835, National Library of Australia, http://nla.gov.au/nla.obj-138922690; John Skinner Prout, *Ben Lomond from Fingal V.D.L.*, 46 1844, 46 1844, National Gallery of Victoria, http://www.ngv.vic.gov.au/explore/collection/work/28585/; Eugen von Guerard, *Ben Lomond, Epping Forest, Tasmania*, 1867, 1867, National Library of Australia, http://nla.gov.au/nla.obj-135745089.

Figure 62: Ben Lomond from Arnold's Heights, 1824 (Lycett).

Figure 63: Ben Lomond from Boney's, 1835 (Glover).

Figure 64: Ben Lomond from Fingal, 1844 (Prout).

Figure 65: Ben Lomond from Epping Forest, 1867 (Guerrard).

Not all of the landscapes shown in these paintings are the result of Aboriginal cultivation, however. Some of these artworks show a mixed landscape, such as Guerrard's *Ben Lomond, Epping Forest*. By the time this artist was in the area, the landscape had been somewhat adapted to British purposes, with some clearance occurring. The trees on the left grew surrounded by others – they are tall and concentrate most of the growth at the top, indicating they competitively grew upwards towards the light. In the distance, however, the boundary trees have wider spread branches, and the growth of low shrubbery associated with the cessation of fire burning regimes testifies to recent changes in land management practices. Eucalypts respond to the availability of light, stretching to get maximum exposure. When they are surrounded by other trees they will reach up towards the sky, while those on the margins or standing in an open space will expand into their surrounds.[433]

The name of the viewpoint gives a significant insight into the uses of that particular area. The area may have been named after the Epping Forest in England for abstract honorific rather than descriptive reasons – Evans stated that the Tasmanian version was a 'A wooded tract called, by His Excellency the Governor, Epping Forest', but gave no more specific reasoning for the choice of name.[434] However, other evidence suggests the name described an area reminiscent of England.[435] In Guerrard's painting Epping Forest is shown as relatively open ground, leading into thick woods. Not only was it wooded, some of the earliest colonial descriptions of the area imply it was the only forest for several miles around. On his journey of exploration through from Hobart Town to Port Dalrymple, through the Midlands, Surveyor-General Charles Grimes

Figure 66: Launceston to Ross, with detail of Camden Valley, 1807 (Grimes, Exploration Chart 29).

[433] Gammage, *The Biggest Estate on Earth*, 18–47.
[434] Evans, *A Geographical, Historical, and Topographical Description of Van Diemen's Land*, 76.
[435] Sharon Morgan labels the general application of British names to new locations an attempt to 'retain their Englishness': *Land Settlement in Early Tasmania*, 163.

scrawled notes on *Exploration Chart 29* (Launceston to Ross). On Friday the 6th of December 1807, they reached the 'Commencement of Epping Forest' and the next day travelled 'about 10 miles [16 kilometres] thru Epping Forest' to Henrietta Plains. Now called Powranna, these plains sit four kilometres north of the modern boundary of Epping Forest. This area is named Camden Valley on both *Exploration Chart 29* (figure 66) and the annotated 1814 print of Flinders' Chart of Terra Australis.[436]

Grimes noted the route on his chart, with trees lining the path. This map used minimal symbology, indicating land and flora quality through simple illustrations. If trees were drawn, it was because Grimes had found trees in that area, and they were of note. On Flinders' map, however, the area is described as 'fine hilly country' without any mention of trees. This is not surprising. Flinders' survey was not exhaustive in any way, merely indicative of the terrain. Most compelling is *Exploration Chart 2* (figure 67), drawn by William Wedge Darke in 1829. It shows a very large wooded area, labelled 'Forest', with land grants encroaching on the edges. R.J. Fensham compared this map to the 1989 boundary of Epping Forest, and found it to be very similar.[437] Today much of the forest has been cleared, leaving only a small reserve, used for rough sheep grazing, surrounded by farmland.[438] In 1969, Stephen Roberts wrote that land grants expanded from Sorell to the 'inferior lands of Epping Forest as well

Figure 67: South Esk, Macquarie and Elizabeth Rivers, 1829 (Darke, Exploration Chart 2).

[436] Grimes, 'Exploration Chart 29'; Matthew Flinders, *Historic Plan 1: Chart of Van Diemens Land*, 1814, 1814, AF395/1/2, TAHO, http://stors.tas.gov.au/AF395-1-2.

[437] RJ Fensham, 'The Pre-European Vegetation of the Midlands, Tasmania: A Floristic and Historical Analysis of Vegetation Patterns', *Journal of Biogeography*, 1989, 41.

[438] Kirkpatrick, Bridle, and CSIRO (Australia), *People, Sheep and Nature Conservation*, 51.

as to the luxurious Macquarie Plains.'[439] This entire stretch of land along the South Esk River is known to flood, but whether Roberts based his statement on historical accounts or modern conditions is not clear.

Epping Forest appears as a Forest among Plains on some of the earliest charts of this area. Bounded on east and west by the Macquarie and South Esk Rivers, Epping Forest has Henrietta Plains (Powranna) to the north, and Macquarie Plains directly south.[440] These names reveal that this was a patch of woodland surrounded by open areas, even when the British first came to the area. As a popular thoroughfare, the Midlands were often described by travellers, with explorer William Breton calling the transition from trees to plains 'not at all gradual'.[441] Unwittingly he confirmed the existence of abrupt forest edges, or fire boundaries, as shown in contemporary paintings. This was an area under extensive British habitation by 1824, when Thomas Scott showed grants stretching along almost the entire lengths of the main rivers running through. These were the same 'fine lands', with 'excellent pasturage' and land of the 'best description', 'perfectly free from timber or underwood', much admired by Evans in his *Description of Van Diemen's Land* that were the first-choice land for the land-hungry colonists.[442]

It is unlikely that this pocket of forest formed naturally – clans of the North Midlands and Ben Lomond nations passed through this area, possibly other nations as well.[443] In an archaeological study of the Midlands, Sue Kee suggested that the riverine lands surveyed along the South Esk and Macquarie Rivers were used in connection with the river – the waterways formed travel routes, and the lands were used transitorily.[444] The routes of Aboriginal tracks are not known with any precision, although many of the earliest colonial roads followed what was already there, and may preserve long-used trails. Nonetheless, a forest located between two navigable rivers, and on several different cross-country routes must have been convenient for the travellers needing reliable resources in another Nation's territory. When viewed in light of the surrounding plains its significance becomes clear.

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439 Stephen H. Roberts, *History of Australian Land Settlement: 1788–1920* (New York: Johnson Reprint Corp, 1968), p.45.

440 Evans, 'Evans, VDL, 1821'.

441 W. H. Breton, *Excursons in New South Wales, Western Australia, and Van Diemen's Land, during the Years 1830, 1831, 1832, and 1833.* (London: R. Bentley, 1834), 305.

442 Evans, *A Geographical, Historical, and Topographical Description of Van Diemen's Land*, 77.

443 Ryan, *Tasmanian Aborigines*, 29–34.

444 Sue Kee, *Midlands Aboriginal Archaeological Site Survey*, Occasional Paper 26 (Tasmania: Dept. of Parks, Wildlife and Heritage, 1990).

Such pockets of forest were not unusual – Robinson expressed relief at finding cleared land after 'being immured in forest for four days', while Edward Curr puzzled over 'whether the forests in this Island are encroaching on the clear grounds, or the clear grounds on the forests.'[445] Gammage has more recently interpreted it as the latter, arguing that forests were moved to allow soils to rejuvenate.[446] No description of Epping Forest's condition at the beginning of the colony has been found, but Grimes estimated travelling ten miles through it in a day. In comparison, Henry Hellyer reported enormous difficulties when travelling through part of Surrey Hills, estimating his party were managing 'five hundred yards in some ... horrid scrub.'[447] For Grimes and his party to travel ten miles in a day suggests it was relatively easy-going, although still impeded by some obstacles. A daily distance of twenty miles might have been expected, but the party probably took a slower pace to record their findings.[448] While Gammage placed more significance on cleared areas over forested, without dwelling in depth on the uses of wooded regions, timbered areas were important for many species. The edges were valuable for providing shade and shelter for animals that prefer to eat in the open, but sleep hidden. Kangaroos like open grass on forest edges, while possums search for fresh tips in open forest.[449] Epping Forest was not the only treed part of the Midlands – the paintings discussed earlier demonstrate clearly the patchwork in place, but its location and size follow Gammage's argument that these were intentionally created habitats that would enable the reliable sourcing of particular animals.[450]

Case study two: an updated methodology towards understanding the landscape

The example of Ben Lomond and Epping Forest demonstrate some of the ways in which a fire-stick farmed Aboriginal landscape was visible to the colonists, and how we can identify them today. The Midlands of Tasmania were, however, very well travelled and admired for

445 G.A. Robinson, '7 July 1831', in *Friendly Mission*, ed. N.J.B. Plomley (Hobart, 1966), 371–72; E. Curr, 2 October 1827, VDL Co P 20/231, MM 71/5, TAHO; cited in Gammage, *The Biggest Estate on Earth*, 221; see also p. 194.

446 Gammage, *The Biggest Estate on Earth*, 211–38.

447 Onfray, 'Cultural Artefacts or "neglected Old Parks"', 2.

448 Naismith's Rule suggests that an easy expedition in fair conditions should allow one hour for three miles by foot. William Douglas, ed., *Scottish Mountaineering Club Journal*, vol. II (Edinburgh: Scottish Mountaineering Club, 1893), 136.

449 Gammage, *The Biggest Estate on Earth*, 199.

450 Gammage, 1–4.

its picturesque qualities, and therefore well documented. Not all areas were as popular with Europeans, and the surviving records contain only sparse descriptive detail. The approach taken in this section demonstrates that further detail can be discovered by using HGIS data, enabling historians to extend their analysis beyond the constraints of surviving charts, artwork and journals. This case study still uses primary sources, but takes some, the land grant and sale records for example, and aligns them to the landscape itself. The preceding chapters have outlined the process and preliminary descriptions of each settlement pattern, but here we draw these findings together to discover several overarching patterns.

New Norfolk sits at the southernmost edge of the Big River Nation, where the Derwent River formed the boundary between the Big River and South East Nations. It stretched up to Surrey Hills, just north of the now-famous Cradle Mountain, while its eastern boundary followed the Jordan River and Western Tiers. Ryan suggested that the Big River people, the largest nation, had a population greater than the conservative estimates of 400 to 500 people who were split into seven or eight clans. Although lacking direct coastal access, the Big River territory contained a number of lakes and rivers, and they were the only group thought to have regular passage to both east and west coasts, through trade agreements, following a number of well-worn trails through the country. Ryan also argued that they had very little contact with their immediate neighbours, the South West Nation. The locatable clans were all situated west or north of New Norfolk, around the Dee, Ouse and Clyde Rivers, although it must be remembered that there were several not identified by Plomley that may have been located further south.[451] This is not an area that has undergone any extensive archaeological survey, and it is difficult to establish an archaeological basis for understanding Aboriginal land uses in this area.[452]

The environmental factors that attracted the Europeans to particular areas were, however, more complicated than the appearance of the landscape. Although they did not have the complicated knowledge of twenty-first century agricultural scientists, the evidence shows that they were still able to evaluate land potential. The discussion in previous chapters has concentrated on the soils particular to each settlement pattern, but a comparison of all of

451 Ryan, *Tasmanian Aborigines*, 25–29.

452 There may have been archaeological reports conducted by private organisations that have not been accessible to this study.

the soils found within the areas of alienation reveals the common determinants. By disregarding pattern type, and focussing solely on the soils that touch any land grant that has a date of alienation, the similarities become clear.

Digit	Rainfall	Geological Period	Rock Type	Altitude	Topography	Variation
1	10%	0%	0%	69%	0%	59%
2	69%	0%	38%	31%	34%	24%
3	14%	0%	24%	0%	31%	10%
4	3%	0%	14%	0%	31%	0%
5	3%	0%	0%	0%	3%	7%
6	0%	10%	0%	0%	0%	0%
7	0%	45%	0%	0%	0%	0%
8	0%	14%	24%	0%	0%	0%
9	0%	31%	0%	0%	0%	0%

Figure 68: Soil attributes breakdown. For a complete key to the classifications see Appendix Eight.

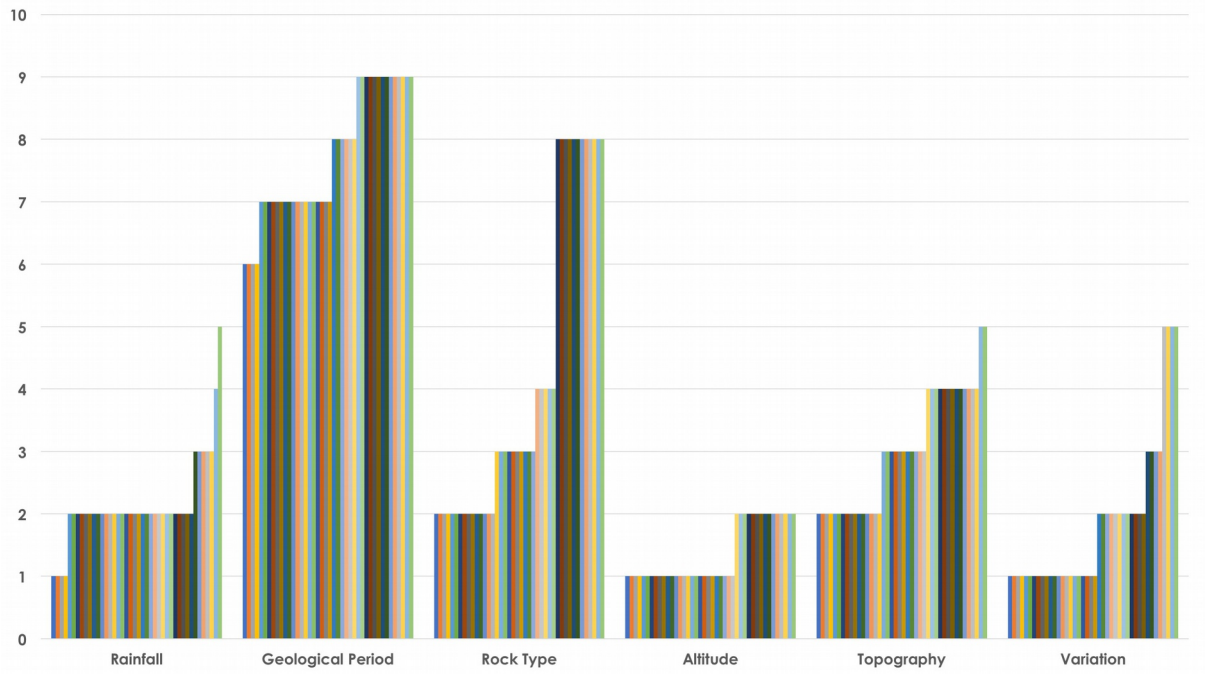

Figure 69: Soil attributes of each grant broken down.

In each pattern heretofore discussed, the importance of water access has been a continuing theme. What this data reveals is that it was not only access to the rivers, but a reliable rainfall that motivated land choice. 74 percent of the soils received 500–625 mm of rain annually (when this data was collected in the 1980s). Explorers, surveyors and settlers

assessed the rainfall potential of an area by observation – one of the failings of Risdon Cove was that it was located during the spring, and the quality of green grass misled the British about the reliability of rainfall and fresh water.[453] Drought prevention quickly became a factor in land choice, and their consistency in locating areas with similar rainfall suggests the British were quick to learn to read the landscape. The land grant and conveyance records are not reliable enough to evaluate the seasonal land-granting patterns – knowing when the settlers were more likely to choose their land would shed light on how they understood seasonal rainfall distribution in different areas. As the records reflect when a land grant was formally recognised, rather than when the settler first used the acreage, they cannot reveal that level of information. It must be remembered that the areas were first found to be suitable by surveyors who had the opportunity to observe the patterns across the island as they explored and mapped it. The areas 'opened' for settlement were those that had been found suitable for agricultural and pastoral pursuits, a qualification that included sufficient reliability of water.

The other primary determinant of all the settlement patterns was altitude, with 69 percent of soils touched lying between 0 and 300 metres above sea level. The topography of these lands is surprisingly variable, but the majority of soils are either undulating plains or low hills (less than 100 metres high). This confirms the appearance of these settlements, as they lie on the river edges, and stretch only reluctantly up the sides of the valleys. This is starkly apparent when parts of the settled districts are seen in 3D, laid over their contours. Appendices Six and Seven show New Norfolk, dominated by riverine intensive properties, and the mixed settlement of Oatlands. Land away from the river edges still had value – as Chapter Five showed, riverine land was not always suitable for grazing stock, especially during wet seasons. Those acreages located away from the rivers or flood plains were usually part of a larger grant or intended specifically for grazing.

When historians write about land alienation in Van Diemen's Land, they often incidentally suggest a continuous front pushing out from a core. This can be seen in Sharon Morgan's work, for example, when she focussed on the increasing size and number of grants. By listing them as numbers, within broad districts, it is easy to imagine they were all connected as entire regions removed from Crown land.[454] By using HGIS to chart the individual

[453] Evans, '"Antipodean England"?', 68.
[454] See Chapter One in Morgan, *Land Settlement in Early Tasmania*, 5–23.

properties, however, this illusion is broken. It becomes clear that the frontier was not a solid line. Lyndall Ryan called it 'corridor fashion', as the settlers took in the Aboriginal hunting grounds and ignored the forested areas, but even this suggests a contiguous push across the land.[455] Instead it was a series of forays into the hinterlands, slowly expanding out like inkblots on tissue paper until they joined with other properties in their vicinity. The scattered nature can be seen at figure 70, which shows the scattered nature of early alienation around Campbell Town. By assuming continuity in the frontier, the considerations driving the alienation of every acre have been ignored. This in turn has obfuscated the differences between riverine intensive and open extensive land grants.

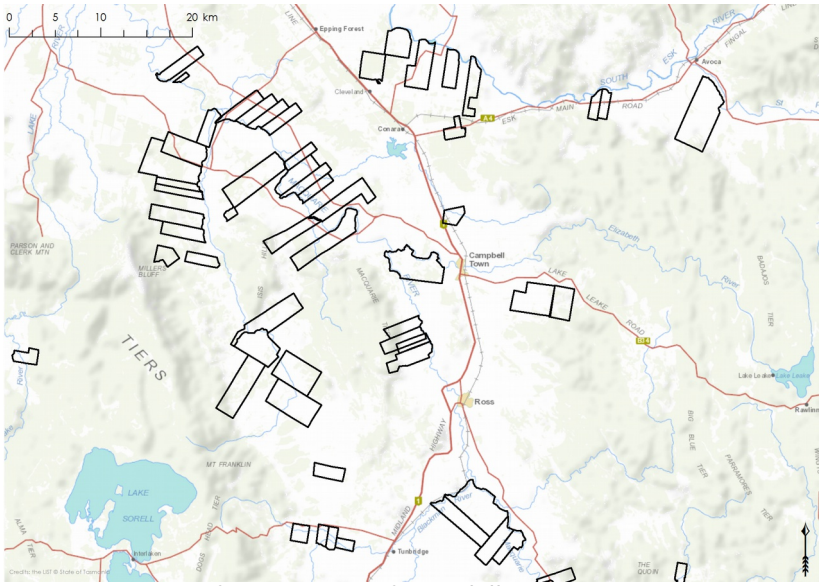

Figure 70: Scattered properties around Campbell Town to 1825 (LISTmap).

These environmental consistencies between the two patterns, were driven by the settlers seeking reliable soils and water access. The Land District Charts also demonstrate the appeal of flatter lands to the earliest grantees. Not only did the charts record the official acreage and landholder, they also listed the status of the landholding at the time of drafting – whether it was a grant, under location order, or had been purchased. Figure 71 shows all the properties of Bothwell, as contained on the LDC. The data was not filtered by year of alienation, and therefore shows every property including those outside the date range of this research. By displaying these properties according to their landholding type, they reveal that the vast majority of properties granted (or held under location order) were on the plains, while the purchased properties spread into the hills around them. As Chapter Three outlined, land granting ceased in 1831, to be replaced with auction and sale. This procedural change is reflected in these charts – the majority of properties that have an identified date of alienation (therefore before 1835) are grants and lie on the flatter lands.

[455] Ryan, *Tasmanian Aborigines*, 75.

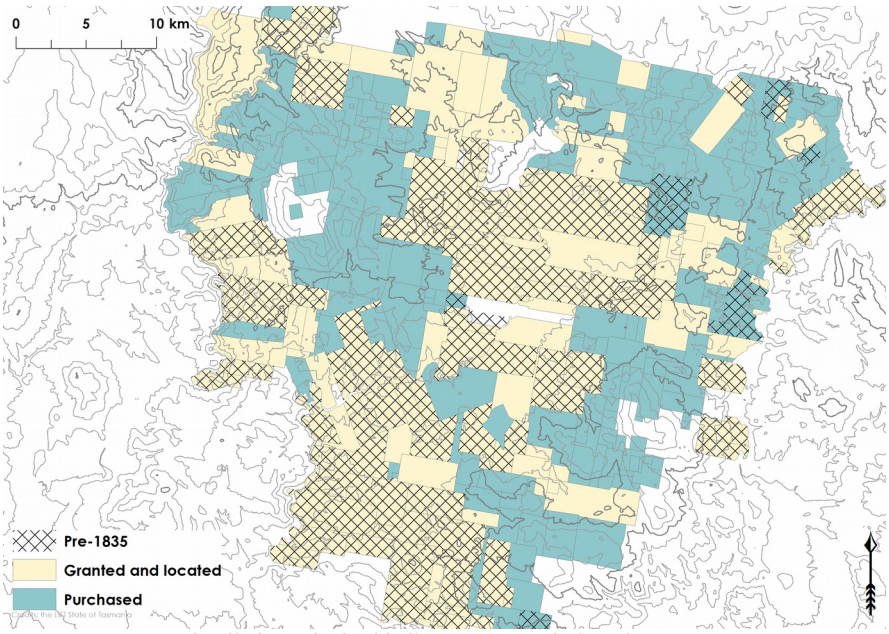

Figure 71: Bothwell shown by landholding type, overlaid with contours (LISTmap). Properties with an identified purchase date shaded.

The hills are dominated with properties alienated later and by purchase. By 1831, this suggests, most of the land available for alienation was lower quality, hillside ground. The flats had already been claimed by the settlers of the 1810s and 1820s.

What these conditions show is a European propensity to move into the 'plains', almost to the exclusion of other landscapes. As they jumped across mountains and forests to the next cleared area, they mimicked the pattern established by thousands of years of management by the preceding occupants. But the Tasmanian Aborigines did not only have one use for mosaic clearance. In some areas, such as the aforementioned Goderich Plains, chutes would drive the animals into traps, while elsewhere, such as in the south-west, fire kept sedgelands clear to encourage the growth of edible plants.[456]

Likewise, the settlers' intentions towards these lands were not always the same. As the preceding chapters have shown, the riverine intensive was informed by government policy, while the open extensive was created when free settlers came to the colony with assets and ambition as the pastoral economy expanded. To assess the patterns only against their environmental conditions, however, dulls the nuances between the patterns.

The question remains, what exactly did Meehan find around Back River that resulted in almost a blank space on the chart, and what did the British see as making it ideal for settlement? From the environmental and historical evidence, is it possible to speculate that the area initially chosen for the Norfolk Island evacuees was also an open landscape when the Europeans arrived?

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[456] Gammage, *The Biggest Estate on Earth*, 69–70, 80–83.

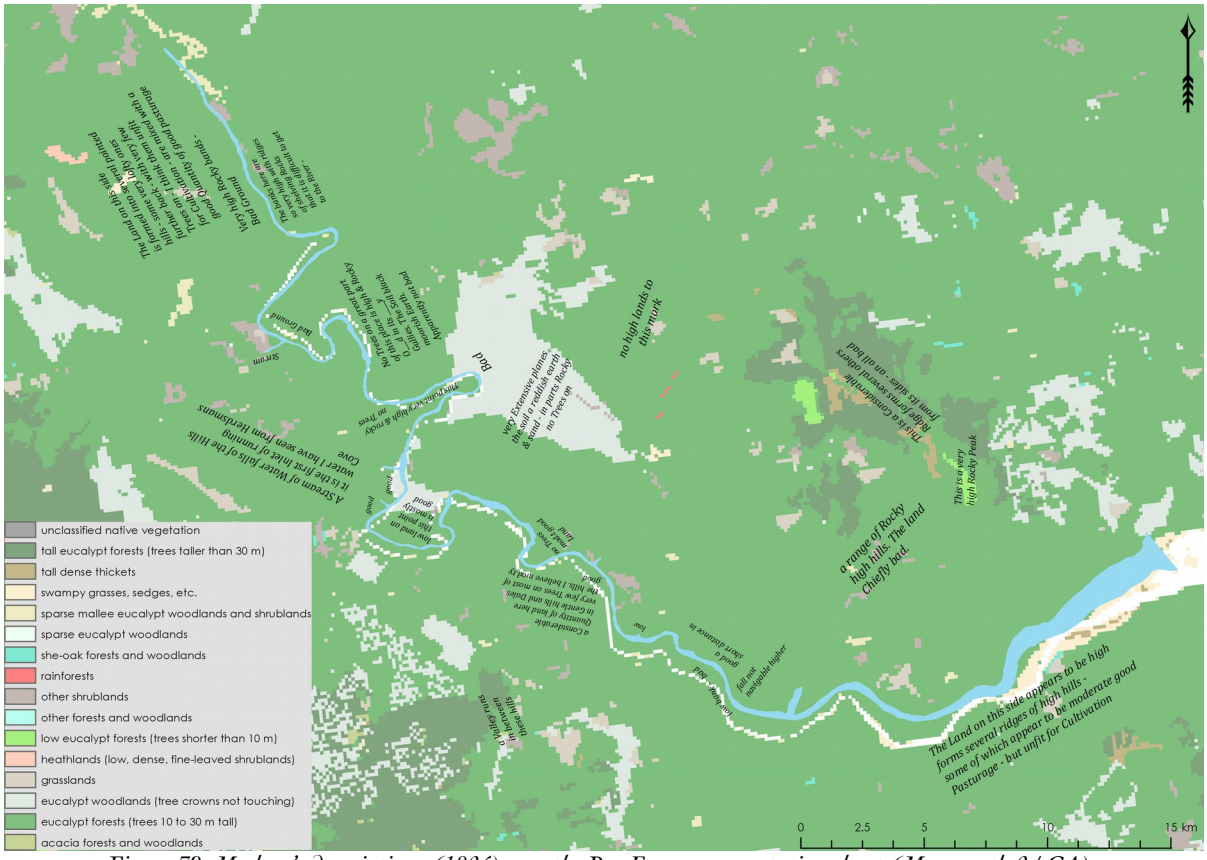


Figure 72: Meehan's descriptions (1804) over the Pre-European vegetation chart (Monmouth 0 / GA).

The earliest European descriptions come from Meehan's *Monmouth 0* chart, drawn up in 1804. This is also the only surviving chart showing this area before 1814 – any other charts made at the time of settlement have been lost to time. This leaves a large gap to fill, especially as *Monmouth 0* does not give a compelling argument for the habitability of the site. The pre-European vegetation chart suggests that much of this area was covered by open eucalypt forests, but this chart is not reliable at this level of fine detail, and as figure 72 shows there are contradictions between Meehan's descriptions and the hypothesised vegetation.

When Meehan pushed through the bush and scrambled up hills on either side of the Derwent, he was one of the first Europeans to enter the area. Meehan did not describe every metre of land, often including only general comments about a broad area – he did not think very much of the Hobart Rivulet for example: 'The Land on each side of this Stream is highly Barren'. One of the first things that stands out on figure 73 is the almost complete absence of comments in the area that would become the riverine intensive section of New Norfolk. What comments there are, show that this land was not of the quality Meehan

sought – at the back of Back River the land was 'chiefly bad', while the entire stretch from the area now known as Bridgewater to Sorell Creek was 'unfit for cultivation', although it did offer the small consolation of having 'moderate good Pasturage'. West of the Back River, the land was 'good a short distance in'.

Figure 73: Two stages of settlement in New Norfolk, on Meehan's description of the areas (Monmouth 0).

The land chosen for the open extensive stage, however, was praised by Meehan (figure 73). *Monmouth 0* shows the land above Plenty as having 'modlty [moderately] good' lands, 'reddish soils', with 'gentle hills and Dales'. The note 'no trees' is written several times across this section of the chart. Further up the river there were 'very Extensive planes [sic]', and the land was 'apparently not bad' in patches. This map shows Meehan travelling through what he took to be uninspiring country, and passing the falls, before finding himself in a pocket of land seemingly made for British agriculture. These descriptions captured a mosaic landscape, one which shifted very suddenly from unremarkable to valuable by British standards.

There is very little detail about this area, on either the eastern or western banks of the river, and it is possible that the terrain here was impassable for Meehan, either because of

topography or dense scrub.[457] When Thomas Laycock made his 1806 expedition from Launceston, he too was forced away from these lands. After admiring the Macquarie Plains, with 'fine grazing Land, the timber thin and Small…', he found access to the river blocked by 'a body of high Mountains…which appeared difficult to penetrate.'[458] In light of these descriptions, the choice of such a site for settlement is somewhat mysterious.

The next description of the area was made four years later in 1810, three years after the land had been alienated. John Oxley commended the area for its ready water access and for being 'extremely fertile'.[459] Ten years later John Bigge reported the formerly 'rich soil' had been exhausted by continual cropping.[460] What its capabilities were over a decade after settlement is irrelevant; his comments suggest that this was good land at least at the beginning. What these contradicting assessments reflect are the changing priorities of the colony. Meehan and Laycock were more interested in large areas that could be used for grazing, suggesting that the colony was interested in large-scale farming from the beginning. But the New Norfolk settlement was located within a valley surrounded by steep inclines, with limited prospects for expansion. The earliest plots of land granted here were set out in a riverine pattern, but they were distinguished from the Norfolk Plains grants of the same period by only forming one row (see figure 74). This was in keeping

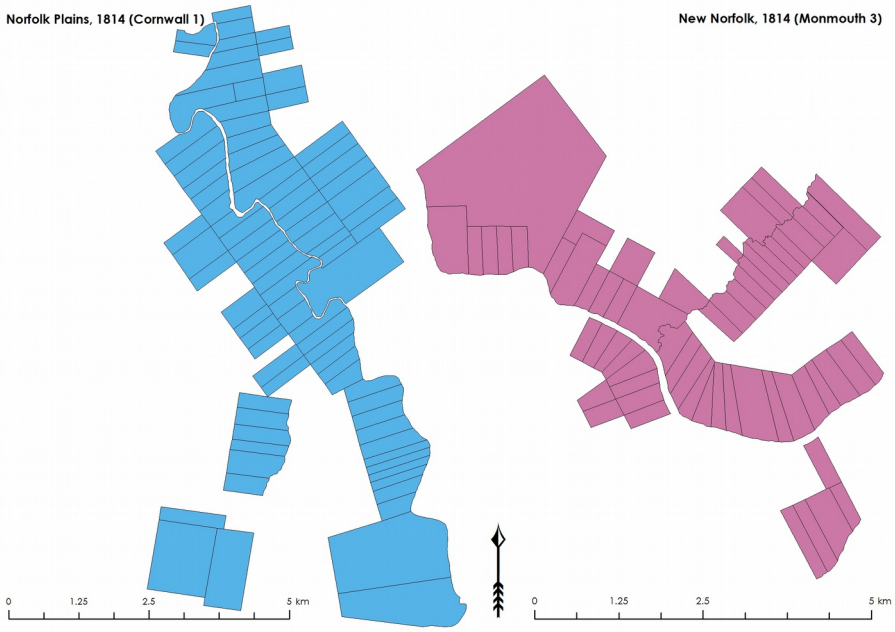


Figure 74: New Norfolk and Norfolk Plains, both 1814.

[457] Such detail is probably recorded in Meehan's journal, but transcribing that document deserves an entire thesis. The movements of Meehan on this exploratory expedition would contribute significant information to this discussion, and I hope that will be completed some day. For example: James Meehan, 'Meehan Survey, Risdon (?) Area' n.d., LSD 355/1/3, TAHO.

[458] Journal of T. Laycock, 9–10 February 1807, HRA III (i), 746.

[459] J. Oxley, Report on Settlement, 1810, HRA III (i), 574.

[460] Bigge, *Report on Agriculture and Trade in N.S.W*, 26.

with the colonial government's intention of continuing control over the emancipists, but it also lay the groundwork for future pastoral expansion.

The New Norfolk site must have been chosen from the river rather than overland, as the mountains surrounding it dissuaded explorers from entering by foot. The absence of abundant narrative description (for want of a better term) shows that this area was not one highly regarded by the earliest Europeans to venture through. The environmental record and the record of events are, however, in agreement: the Back River site at New Norfolk was similar to that of Macquarie Plains, although it lacked the room to expand very far beyond the riverine intensive layout. The Derwent River was a significant route of transportation for the early colony, and the site of New Norfolk was chosen as a gateway that opened up Macquarie Plains and further, beyond the navigable reaches of the river. The area must have been at least semi-open on European arrival; for the settlement to survive it needed to become established rapidly, and extensive clearing would only hinder that process. When Bowen said 'very little trouble might clear every Valley I have seen in a Month' he may not have meant New Norfolk specifically, but the entire length of the Derwent River ripples with hills and valleys, and they must have all been sparsely covered for him to show such confidence.[461]

By moving beyond the contemporary accounts of the landscape, the landscape of the pre-European New Norfolk area has become clearer. While the written accounts disagreed on whether it had bad or fertile soil, the environmental evidence reveals that it was well-suited to European needs. In turn, these reflect the landscape that existed before the land was alienated. By confirming that New Norfolk shared similar attributes with other early settlements, it is apparent that the land chosen along Back River was somewhat open, and had probably been fire-stick farmed prior to the arrival of the Europeans. Ascertaining the purpose of the clearing requires further study. The intensity of European occupation on the river edges, without any attempt to form a second row behind the first, reflects the terrain of the steep valley-slopes, but probably also mirrored the pre-existing clearance patterns. The land along the Back River may have formed part of a trap, a thin corridor along which animals were chased down to the water's edge, hemmed in by the hills on either side. In which case verdant greenery would be a secondary consideration only after creating a clear

[461] Lieutenant Bowen to Governor King, 20 September 1803, HRA III (i), 197–98.

route for panicked animals to take. This might explain why it was considered unremarkable by the earliest explorers. It does not, however, mean that it was not an area of interest for historians today.

Conclusion

The examples of New Norfolk, the Midlands and Norfolk Plains reveal a European predilection for clear land, accessible by river. In the early years, water carriage and ready-to-farm land were crucial; both made it possible to establish a self-sustaining farm quickly. As the pastoral economy expanded, with the introduction of fine wool farming and a growing market for Tasmanian grains, the importance of water shifted, but obtaining land on the valley floors with reliable water-courses was still a priority. It was to this end that these lands were chosen, but continuing priorities emerged when considering Gammage's hypothesis on the extent of Aboriginal fire-stick farming alongside examples of British priorities, descriptions and actions. It is clear from the very beginning of European occupation, settlements were placed within areas that had been cleared as part of the pre-existing Aboriginal mosaic farming system.

The biggest factors influencing Europeans in their selection of land grants were that the land were:

- Close to river transportation
- Relatively open and free from forestation
- On flat or low-hilled ground
- Close to, and granting access to further lands that could be alienated.

This chapter has considered several different aspects of historical analysis of both Tasmanian Aboriginal and European land use on this island. Colonial interest in an area has influenced where historians focus their attention, resulting in patchy consideration of the relationship between pre-European and colonial land use. This chapter has brought together the evidence of contemporary journals and artwork with HGIS, using environmental evidence and analytical methodologies to build up a picture of the lands the Europeans were first drawn to. As I have demonstrated in this chapter, that the Europeans moved into areas that had already been cleared through thousands of years of Aboriginal

land management. By viewing colonial land use in Tasmania as a continuation of these old patterns, rather than as a fresh start, the historian can draw an illustration of the land the Europeans found, even when there are few surviving descriptions. This in turn allows for speculation about how the Tasmanian Aboriginal people of that area used the land.

Chapter Seven:
Fear and Fortune in Van Diemen's Land

Nikolai was a simple farmer, did not like innovations, especially the English ones which were becoming fashionable then, laughed at theoretical writings on farming… And Nikolai's farming produced the most brilliant results.

Tolstoy, *War and Peace*[462]

Farmers will never grow rich until they fence their lands and crop their ground after the English fashion.

The Farmer's Journal, 1 March 1828[463]

[462] Leo Tolstoy, *War and Peace*, trans. Richard Pevear and Larissa Volokhonsky (London: Vintage Classics, 2010), 1144–45.

[463] 'The Farmer's Journal', *Colonial Advocate, and Tasmanian Monthly Review and Register*, 1 March 1828.

The previous chapters have drawn upon charts, journals, records and the soils themselves to build up several different stories about land settlement in Van Diemen's Land. Some themes have recurred in the sources – the importance of water and flat lands for example, but the focus has been on distinguishing different phases of settlement. This chapter zooms out to see each of these threads within their larger context, the story of dispossession and alienation across the island. It addresses the question of whether Van Diemen's Land was a 'Little England', or something else altogether, looking at the background, motivations and actions of those settlers who were physically responsible for shaping the Tasmania we see today. Rather than assuming that governmental intentions and instructions were fulfilled, this chapter expands on questions of practicality and manipulation that have arisen throughout discussion thus far. It asks why Van Diemen's Land was seen as a desirable place for the colonists who relocated from Britain and Ireland. It also investigates the creation of a distinctive form of agriculture in the colony, arguing that the traces of England that visitors saw in the landscape were ghosts of memory rather than intentional mimicry. It looks at large patterns of change evident in the landscape. These resulted from an influx of capital, as production shifted from subsistence farming to export-orientated wool farming. The concurrent increase in hostilities between the Europeans and Tasmanian Aborigines was no coincidence.

Many of the sandstone buildings considered a feature of colonial Tasmania date from the mid-1820s onwards, constructed as the gentry established their dominance. Yet, without the hard work of the preceding two decades, these traces would not have been created. As James Boyce has argued, the settlers could aspire to recreating England in the Antipodes, but they had to first learn to thrive in the unfamiliar environment. This included being shaped by the very landscape they sought to mould.[464] This chapter argues that the disconnect between the emancipist and the free settler stages almost constituted two completely different colonies, but that the colony of the 1820s was entirely a product of its time. It starts with an examination of how the colony transitioned from communal to privatised resources, particularly land and water. This shift is seen in the context of changing demographics and government priorities, and each settlement pattern is seen within this larger transformation. It is this shift that helps answer a question that has arisen throughout the preceding chapters – why were properties often charted as undersize in the

[464] Boyce, *Van Diemen's Land*.

late 1820s? The explanation reveals a society teetering between fear and fortune, as colonists and administrators persevered through the full gamut of colonial experiences. Despite the fear, however, the colony of Van Diemen's Land was a land of opportunity for many, and offered chances unavailable in Britain. Emancipists and free settlers had different priorities in working on the land, and these informed their methods and, in turn, how they were perceived by visitors to the colony. In some ways, these settlers brought very British ideas to the Van Diemonian landscape, but they were moulded by the conditions they encountered as much as their attempts to assert control.

Crown and private land

When the Europeans arrived and established their farms, first along the river edges and then further inland, they removed areas from Tasmanian Aboriginal access. The lands chosen by the settlers were part of a working Aboriginal landscape that provided sources of tubers, meat, grains, and other foodstuffs and resources. This process was gradual, the cultivated land hopping from acre to acre on the former fire-farmed land. On a map this effect is emphasised, as boundaries appear definite. In reality, particularly in the immediate aftermath of alienation, the edges were blurred, as an absence of fences and a reluctance to remain within the registered boundaries created an amorphous patch of alienated land that followed the movement of livestock. As each farm became established, the boundaries solidified and only then did the map reflect reality.

The earliest settlements were confined to small areas, surrounded by land that was not yet required by the Europeans and was therefore largely ignored. They were still focussing on mutton and lamb, rather than wool, and strict containment was not necessary to ensure the purity of stock or fleeces. However, these Crown lands surrounding each block of settlers' acreages were useful for grazing extra sheep and cattle. Figure 75 shows Evans' 1819 map of the Derwent River, with the proportion of each plot that was under cultivation.[465] Inset on this chart are three examples of properties that had very intense usage, beyond the capacity of the acres officially granted.[466] For William Scattergood to graze his stock, while

[465] The amount under cultivation is a combination of wheat, barley, beans and potatoes.

[466] These calculations use the grazing baselines of one cow per acre, and five sheep per acre. Horses have been excluded as they are only infrequently recorded, but when present would have added an additional pressure on the land.

also maintaining the levels of crop cultivation that he recorded on the muster, was only possible if he spread out over the land surrounding his grant.

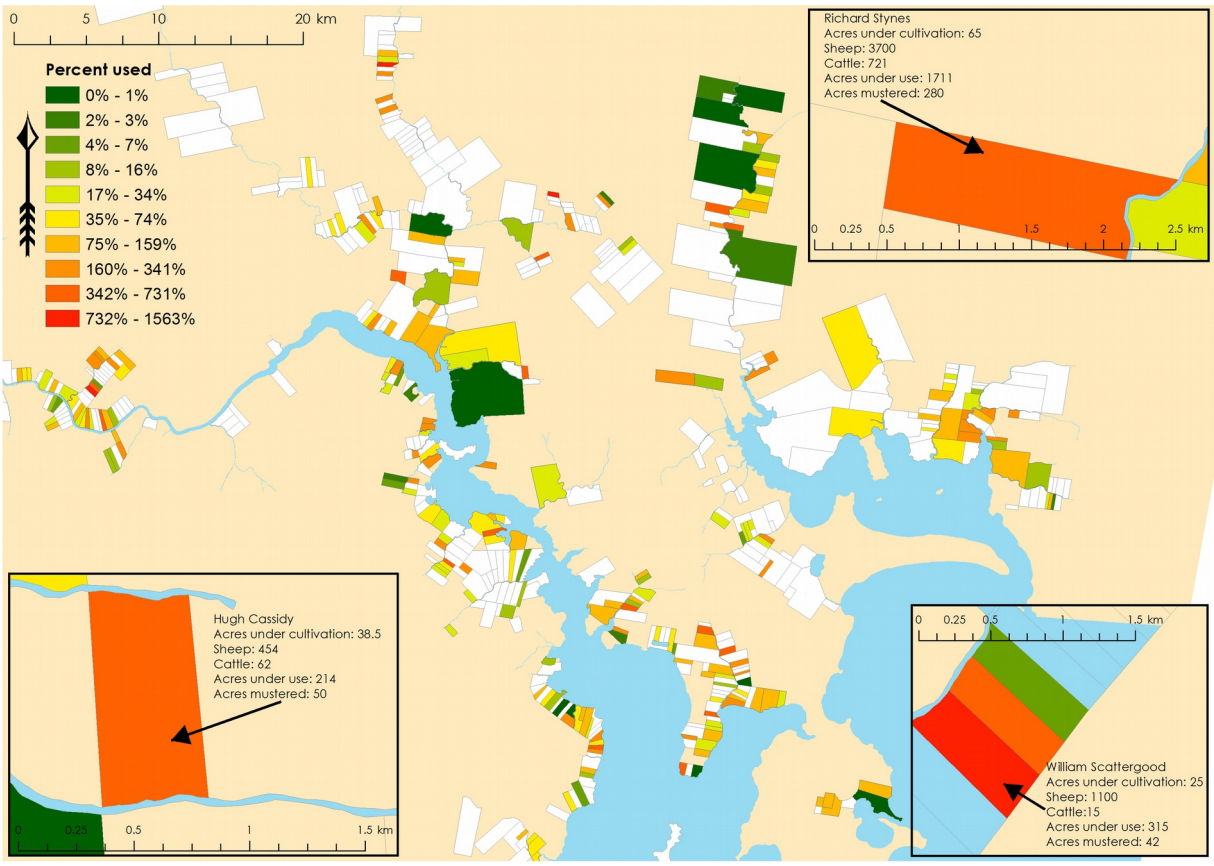


Figure 75: Cultivation of 1819 muster on Evans' 1819 map.

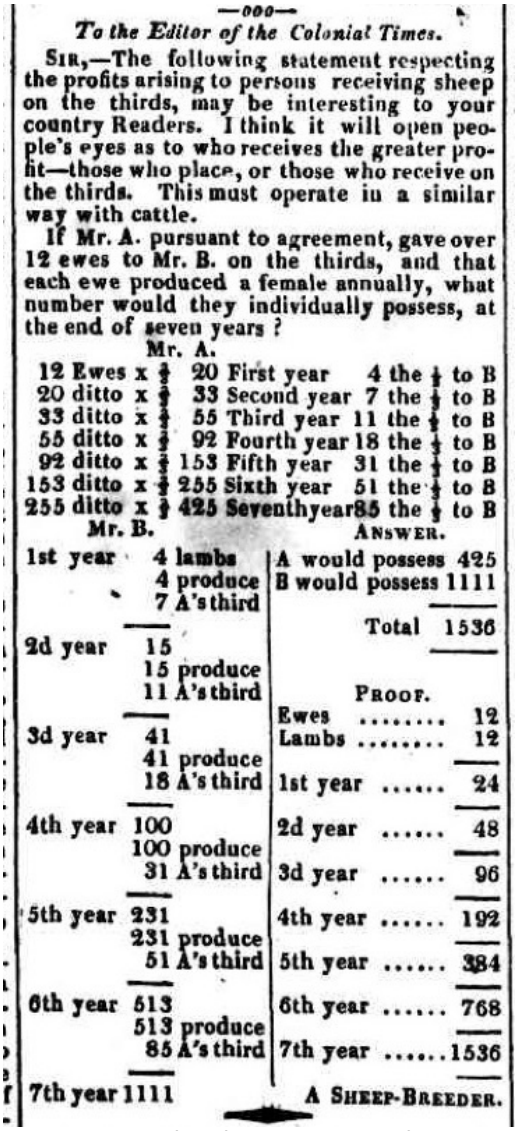
When Crown land was available, it was a valuable resource for those living near it, and it became a more precious commodity as the colony shifted from the compact riverine intensive to open extensive layouts. Settlers would choose lands that were surrounded by Crown land, which they could spread over, but also later purchase if the opportunity arose. The intentional isolation of these acreages ensured that they were located like islands within a sea of Crown land. The land became 'alienated' in the true sense of the word, as these lands, which were open and managed as an entire ecosystem for thousands of years by the Tasmanian Aborigines, were removed from general use.

In the 1819 Hobart muster, sixty-five of the 502 settlers recorded had sheep but no land. They may have run their flock on Crown land, but as these acres were alienated, a system of keeping stock 'on the thirds' increased. Under this system settlers would offer their land for others' grazing, taking a third of the stock increase in lieu of payment. Settlers also used

this system to reward convict shepherds, who would look after the sheep (or cattle) in the remote areas, while the owner lived in or near to the town.[467]

> Sheep and Cattle will be taken on 'the thirds' by Mr. Horace Rowcroft, at the River Clyde; who will be responsible to the owner for all losses by theft, or otherwise, except those occasioned by natural causes, such as disease, &c.[468]

'The thirds' was a popular solution to the loss of access to Crown lands. While Sorell attempted to end the practice during his incumbency, Arthur described the system as a 'pernicious practice' in 1825 and blamed the land shortage on this system – he claimed it encouraged the overstocking of acreages, and was the 'origin' of sheep stealing.



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To the Editor of the Colonial Times.

SIR,—The following statement respecting the profits arising to persons receiving sheep on the thirds, may be interesting to your country Readers. I think it will open people's eyes as to who receives the greater profit—those who place, or those who receive on the thirds. This must operate in a similar way with cattle.

If Mr. A. pursuant to agreement, gave over 12 ewes to Mr. B. on the thirds, and that each ewe produced a female annually, what number would they individually possess, at the end of seven years?

Mr. A.

12 Ewes x ⅔	20	First year	4 the ⅓ to B
20 ditto x ⅔	33	Second year	7 the ⅓ to B
33 ditto x ⅔	55	Third year	11 the ⅓ to B
55 ditto x ⅔	92	Fourth year	18 the ⅓ to B
92 ditto x ⅔	153	Fifth year	31 the ⅓ to B
153 ditto x ⅔	255	Sixth year	51 the ⅓ to B
255 ditto x ⅔	425	Seventh year	85 the ⅓ to B

Mr. B.

1st year	4 lambs		
	4 produce		
	7 A's third		
2d year	15		
	15 produce		
	11 A's third		
3d year	41		
	41 produce		
	18 A's third		
4th year	100		
	100 produce		
	31 A's third		
5th year	231		
	231 produce		
	51 A's third		
6th year	513		
	513 produce		
	85 A's third		
7th year	1111		

ANSWER.

A would possess 425
B would possess 1111

Total 1536

PROOF.

Ewes	12
Lambs	12
1st year	24
2d year	48
3d year	96
4th year	192
5th year	384
6th year	768
7th year	1536

A SHEEP-BREEDER.

Figure 76: Colonial Times, 10 November 1826.

In 1826 'A Sheep Breeder' sent his calculations of sheep numbers over seven years to the *Colonial Times* (figure 76). He concluded that after seven years the landholder would have 425 sheep, while the recipient of the one third would have 1111.[469] Taken at face value, these figures demonstrate the potential of the system to provide a source of considerable income for the landless beneficiary. In reality, theft, illness and stock sales would have affected profits, and it is unlikely that anyone using the thirds was able to achieve anything close to these yields. In the wake of the Bigge Report and shifting perceptions of convicts, the reluctance of free settlers to accept the advantages given to 'lower class' settlers is understandable. Just as Van Diemen's Land was opened for free emigrants, Hamish Maxwell-Stewart has calculated that fifty-two per cent of sheep in the south of the island were owned by emancipists and convicts.[470]

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467 Boyce, *Van Diemen's Land*, 71–72.
468 *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 19 January 1822.
469 *Colonial Times and Tasmanian Advertiser*, 10 November 1826.
470 Maxwell-Stewart, 'The Bushrangers and the Convict System', 171–73; Boyce, *Van Diemen's Land*, 72.

This was significant when in the same year (1817) 17.7 percent of the population was made up of serving convicts (with an unknown proportion emancipist).[471] Despite official reprobation, the thirds could be profitable for both the landholder and stockholder, so the newspapers of Van Diemen's Land continued to advertise land as both available and wanted for the thirds throughout the 1820s and well into the 1830s.[472] By the 1830s, landholders were advertising land for use on the thirds for fine-wooled sheep, while coarse-wooled would be offered on 'the halves'.[473] This was a system that would not be quashed easily.

As the Crown land surrounding the earliest grants was alienated and the grant itself hemmed in, the fluidity of the boundaries came to an end. To some extent this mirrored the process occurring in Britain, of enclosing the commons and ending the public access to them.[474] One could even argue that this is what the British had done to the Tasmanian Aborigines – enclosed the land right from the outset, thus removing their access. In Van Diemen's Land it was far more complicated than this however, as land was alienated but remained unenclosed, with each group attempting to assert their own use over it. As Boyce has pointed out, when the Tasmanian Aborigines incorporated European dogs and guns into their hunting practices, the two groups began to use very similar methods in chasing the native marsupial animals.[475] The Europeans had little need to adapt (or physically enclose) the pockets of 'plains' they found, as they had already been managed for thousands of years as perfect habitats for securing stock.

True enclosure, however, saw the legal owner of the land (the manor lord for example) assert his rights over land that the village peasants had been permitted to use by custom for their own livelihoods.[476] In Van Diemen's Land the Tasmanian Aborigines had no recognised common right to use the land; the Crown was not reclaiming or ending any such privilege – Britain saw itself as the first nation to have rights over the land. For the

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471 Boyce, *Van Diemen's Land*, 105.

472 Curr, *An Account of the Colony of Van Diemen's Land*, 155; Arthur to Bathurst, 11 August 1825, HRA III (iv), 318–19; 'Advertising', *Colonist and Van Diemen's Land Commercial and Agricultural Advertiser*, 25 June 1833.

473 'Advertising', *Launceston Advertiser*, 9 May 1831.

474 Boyce has argued this, but also acknowledged the informal nature of the graziers' possession, and therefore the informal manner of dispossession. See: *Van Diemen's Land*, 152–55.

475 Boyce, 66; see also Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'.

476 Nicholas Blomley, 'Making Private Property: Enclosure, Common Right and the Work of Hedges', *Rural History* 18, no. 1 (2007): 1–21.

settlers using Crown land, this was a stolen benefit, a side-effect of the luxury of space, and one that was extinguished as land was legally claimed. In Victoria and New South Wales squatters would later claim rights over land they had been using for years. In Van Diemen's Land those illegally using the land were removed as a result of land pressure before the opportunity arose to establish property rights through usage.[477]

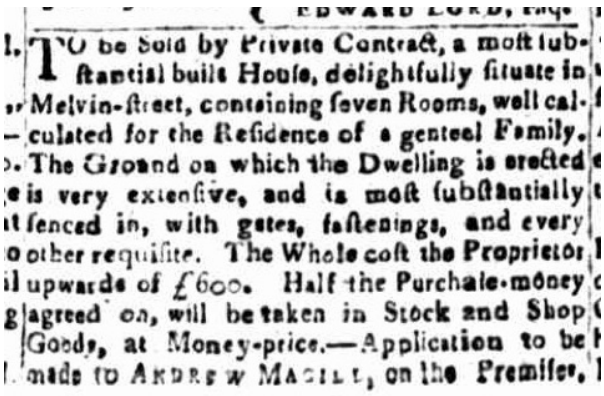
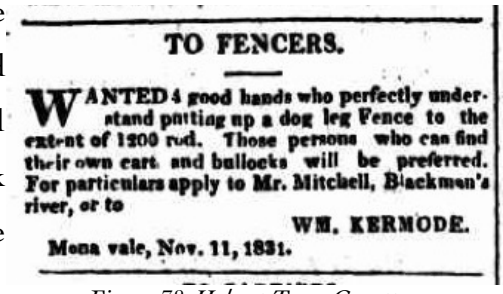

TO be Sold by Private Contract, a moſt ſubſtantial built Houſe, delightfully ſituate in Melvin-ſtreet, conſiſting ſeven Rooms, well calculated for the Reſidence of a genteel Family. The Ground on which the Dwelling is erected is very extenſive, and is moſt ſubſtantially fenced in, with gates, faſtenings, and every other requiſite. The Whole coſt the Proprietor upwards of £600. Half the Purchaſe-money agreed on, will be taken in Stock and Shop Goods, at Money-price.—Application to be made to ANDREW MACKILL, on the Premiſes.

Figure 77: Hobart Town Gazette, 5 February 1820.

For the first twenty years of the colony the majority of fences surrounded the land close to the houses. Charts such as *Buckingham 14* (1823) and *Monmouth 90* (mid-1820s) (figures 83 and 85) show fenced gardens close to the house, while the edges of the outer fields remained open.[478] Gradually, as farms became established, and the landholders could afford the outlay, these outer fields were also fenced, although as *Monmouth 51* (figure 84) shows, even in 1835 not every outer field of a successful property was fenced.[479] By the late 1820s the newspapers were full of classifieds advertising land sales with '40 acres fenced', 'a considerable portion…already fenced in', or 'ten of which are fenced'. These advertisements ran alongside advertisements from settlers looking for men to build fences, and they were a consequence of land pressure, increased emphasis on increasing stock quality, and the growing aspirations of the free settlers.[480]


TO FENCERS.

WANTED 4 good hands who perfectly understand putting up a dog leg Fence to the extent of 1200 rod. Those persons who can find their own cart and bullocks will be preferred. For particulars apply to Mr. Mitchell, Blackmen's river, or to

WM. KERMODE.

Mona vale, Nov. 11, 1831.

Figure 78: Hobart Town Gazette, 26 November 1831.

These same advertisements reveal the prevailing need to keep stock and pests out of cultivated lands, rather than to contain stock, with 'strong' or 'substantial' fences around gardens and crops. In the mid-1820s newspapers such as the *Hobart Town Gazette* started to

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477 See Boyce, *Van Diemen's Land*, 152–55. for discussion on (lack of) rights people had to use these lands

478 W. Sharland, *Buckingham 14: Map of Lower New Town Farm*, 1823, 1823, AF 396/1/16, TAHO, https://stors.tas.gov.au/AF396-1-16; George Woodward, *Monmouth 90: Parish of Grafton*, c 1827, c 1827, AF396/1/299, TAHO, https://stors.tas.gov.au/AF396-1-299.

479 *Monmouth 51: Plan of Mt Vernon Estate of AF Kemp*, 1835, 1835, AF396/1/259, TAHO, https://stors.tas.gov.au/AF396-1-259.

480 For example see: 'Classified Advertising', *The Hobart Town Gazette and Southern Reporter*, 5 February 1820; 'Classified Advertising', *Hobart Town Gazette, and Van Diemen's Land Advertiser*, 22 July 1825; 'Classified Advertising', *The Hobart Town Courier*, 26 November 1831.

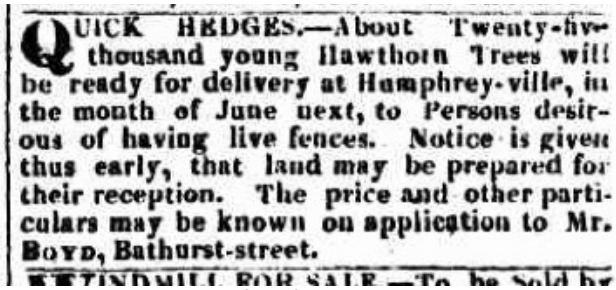
QUICK HEDGES.—About Twenty-five thousand young Hawthorn Trees will be ready for delivery at Humphrey-ville, in the month of June next, to Persons desirous of having live fences. Notice is given thus early, that land may be prepared for their reception. The price and other particulars may be known on application to Mr. Boyd, Bathurst-street.

Figure 79: Colonial Times, 22 June 1827.

run advertisements for 'quick-set' or 'live' fences – hawthorn hedges.[481] While such hedges are practical for their longevity, low maintenance, and impermeability, they are also a direct import from Britain and their introduction in Van Diemen's Land was informed by both practical and aesthetic considerations. The growing desire (accompanied by an ever-increasing ability) to appear wealthy and successful should not, however, be underestimated. In an era of land privatisation, physically enclosed land had a particular symbolism in indicating wealth – it told the observer that the landholder was the legitimate owner, that it was not Crown Land they had absorbed, and they could afford to pay for it.[482] It was therefore important to fence those lands that would be seen by the judgmental guest, those that were closest to the house.

Figure 80: Overgrown hawthorn hedges line a field in Ross (Imogen Wegman, 2014).

This process of privatising resources, removing them from public access, was not unique to land. The first settlements were set out following the 1:3 instructions, which stipulated equal river access. This research has shown what this looked like, and how important rivers were for individuals and for the economy. Over time, however, the waterways were

[481] 'Classified Advertising', *Colonial Times and Tasmanian Advertiser*, 22 June 1827; 'Valuable Property', *Colonial Times*, 2 May 1828.

[482] Blomley has referred to hedges as 'a device through which new forms of spatial discipline were both materialised and enforced' – they did more than merely mark out the territory, they symbolised privatisation and organisation of the landscape. See Making Private Property: Enclosure, Common Right and the Work of Hedges', 5.

also privatised. As settlers moved into the open extensive phase, they found rivers and rivulets that would run through the middle of their grants, providing complete control over that section. Previously, all settlers were guaranteed river access as their properties ran to the very edge of the water. Now they were relying on the smaller waterways that ran through the land, that they could mould to their own purposes. Not only were they claiming exclusive rights over the land, they were also removing the water from common access.

The effects of privatisation of both land and water were felt throughout the colony in different ways – for some it meant water supplies were diminished, such as those around Terry's mill in New Norfolk, while others lost some or all of their ability to keep stock. In 1836, competition for water access was demonstrated by the *True Colonist*, which claimed

> We know many…cases in various parts of the Country, where the courses of brooks have been turned, and the boundaries of estates altered by one man, cunningly and quietly throwing great, trees, roots, and other rubbish into the bend of a brook, where the property on the other side happened to be unimproved, and the encroachment consequently unobserved until a new water-course was so completely formed, that it was impossible to trace the old one, after the bank had been improved.[483]

Not only were the landholders in these cases changing their property boundaries, they were also optimising the waterways for their purposes.[484]

Fear: over and undersize properties

The use and subsequent alienation of Crown lands had consequences beyond reducing the number of acres available for land-hungry settlers (and their hungry sheep). As Chapter Three discussed, the surveyors were continually accused of corruption and incompetence, as their measurements were found to be unreliable.[485] Inaccuracies were not entirely on the heads of the surveyors, however, as settlers were driven by their own circumstances to

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[483] 'The Flood', *The True Colonist Van Diemen's Land Political Despatch, and Agricultural and Commercial...*, 4 March 1836.

[484] This comment also shows that despite the cessation of land granting five years earlier (Chapter Three), they were still able to work the system to use the unalienated or unused land surrounding their own acreages.

[485] For example allegations of incompetence made against G.P. Harris, see Lord to Macquarie, 14 December 1810, HRA III (i), 454; see also Melville's accusations about the early Survey Office: *The History of Van Diemen's Land*.

manipulate the system to their own benefit.[486] In some cases, the settlers used the system to claim more land which they could hold on to if they had it cultivated when challenged.[487] Less obvious to the naked eye, and less reported in the archive, are the negative factors that surreptitiously reduced the physical size of individual's properties. The impact of both positive and negative factors is visible in figure 81, which shows a clear swing from properties that were larger than officially granted ('oversize'), to properties that were 'undersize'.

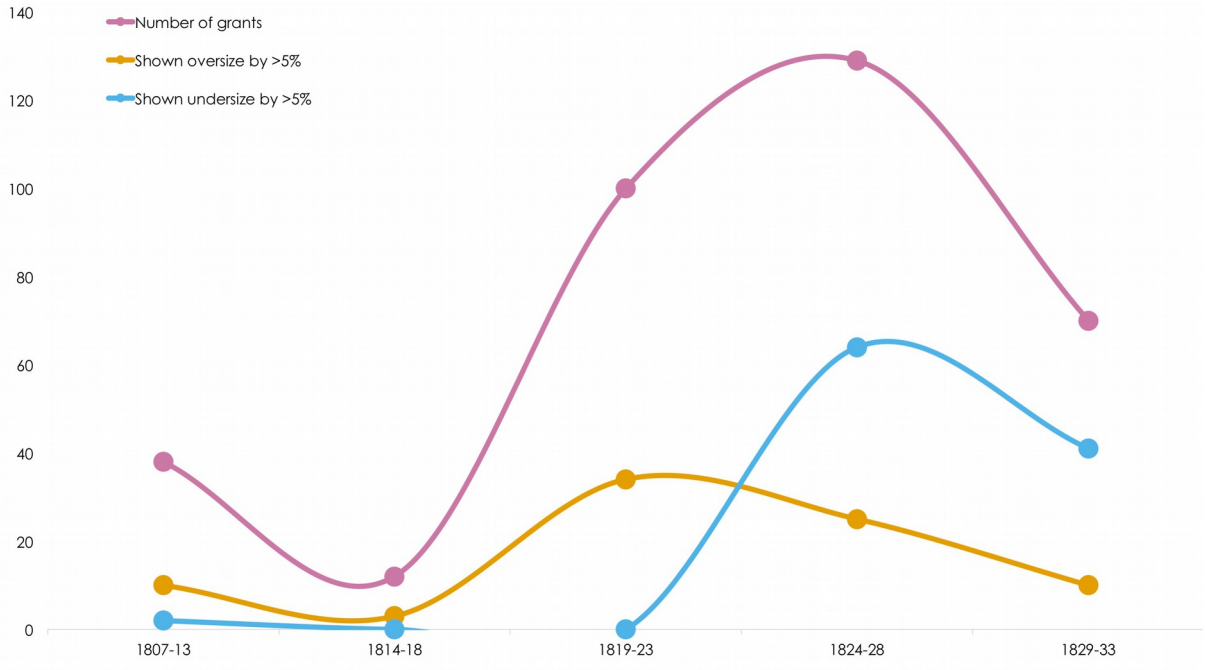

Figure 81: Over- and undersize properties on the LDC.

This graph shows the number of properties that are over- and under-size, calculated by comparing the size recorded on the LDC with their measurable size (as outlined in Chapter Two). That properties were oversize is not surprising in light of early conditions; neither is the increasing accuracy of the charts, as the Survey Office expanded and improved. Throughout the preceding chapters several influences have been attributed to creating oversize properties at different periods. That the colonists lacked the means to adequately mark out dividing lines between properties, combined with the deficiencies in the Survey Office, resulted in a certain amount of ambiguity around boundaries. This was exploited by settlers who expanded onto the Crown lands around their acreages. Such creeping expansion was only possible in the early years of the colony, before the pressure built up to

[486] For example, William Effingham Lawrence's manipulation of the system to gain 12 000 acres when he should not have received more than 1000: Arthur to Bathurst, 11 August 1825, HRA III (iv), 316–18.
[487] West, *The History of Tasmania*, 110–13.

bring every accessible acre into cultivation or pasture. Even by 1819, fifteen years after the Hobart Town settlement, properties were only using an average of 25 percent of their allocated land for non-pastoral purposes (see figure 75). In a time of abundant land and low cultivation rates, accuracy in surveying or boundaries was less important, and it was very easy for settlers to expand from their long-lots in search of new pasture or better land. As land pressure grew, however, new schemes were developed.

Until the 1820s, it was customary for surveyors to exclude 'bad land' from their calculations. This reveals an interesting manipulation by the new Van Diemonian farmer who had a better understanding of the local environment than the government officials. For the British, marshland needed to undergo intensive draining in order to access the fertile soils that lay beneath. It was 'bad' because it needed intensive and expensive development to be useful.[488] This was not necessarily how an agriculturalist who learnt their trade in situ saw such land. Today the importance of wetlands is recognised for watering stock, particularly important in a drought-prone climate, and for supplying a variety of harvestable plants, animals and products.[489] In convincing the surveyors to exclude marsh and wetlands from official measurements, agriculturalists were claiming the full advantage offered, while banking on the British perception of such land. Many of the surveyors throughout this period were also landholders, and were probably quite aware of the benefits the land conferred, but they too were just manipulating British ideas and instructions.

All of these factors, and the inability of the Survey Office to address them, are seen in figure 81, with the peak of oversize properties coinciding with the height of crisis in the Office. The turn towards undersized properties came as the Survey Office was transformed into a well-managed department, with strict oversight and accountability. Although there was still pressure on the department, with large new grants to measure, and old errors (and associated grievances) to repair, it was also increasing in numbers, with more and better equipped staff working in the field. Nonetheless, the old system of claiming land was still in

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[488] For examples of discussion on the cost and value of draining fens see: Board of Agriculture, *General View of the Agriculture of the County of Hants: With Observations on the Means of Its Improvement*, vol. 5, General View of the Agriculture of the County of Hants: With Observations on the Means of Its Improvement 1 (C. MacRae, 1794), 148; 170; Rowell, 'The History of Drainage at Wicken Fen, Cambridgeshire, England, and Its Relevance to Conservation'.

[489] Department of the Environment and, 'Wetlands and Agriculture', Text, 8 February 2016, https://www.environment.gov.au/water/wetlands/publications/factsheet-wetlands-agriculture.

place – grantees would find land, claim it under a location order, and commence using it before it was officially measured and granted. Two new circumstances were introduced in the 1820s that would draw the settlers in from their edges. The first of these was the introduction of the open extensive plot, coinciding with the arrival of increasing numbers of free emigrants. The second was hostility, firstly with the bushrangers and then the Tasmanian Aborigines, as those free emigrants expanded further across the land and pushed the traditional owners and emancipist occupiers off the land.

While Chapter Three demonstrates that the Black War had little direct impact on the work of the surveyors (disruption taking the form of military duties, rather than attacks on them as they worked in the field), it does not discuss how the conflict affected the settlers themselves. While they expanded across the land, venturing further, seeking more, both the Black War and bushrangers presented dangers to which the settlers apparently paid little heed, at least until they met at the frontiers. The two groups, bushrangers and the Tasmanian Aborigines, posed different dangers to the settlers. Maxwell-Stewart has argued that it was rare for bushrangers to harm convict servants. Instead they targeted the masters, performing acts of rebellion as they attempted to balance the scales against their perceived oppressors. Indeed, records show that convicts were often punished for inaction against the bushrangers.[490]

The second threat was a different matter however, as it was the most remote Europeans who most often had violent encounters with the Tasmanian Aboriginal clans within the settled districts. These were usually convict shepherds and labourers, working on the fringes of their masters' grants. Away from the tight riverine intensive settlements, these dispersed acreages were more difficult to defend, particularly before it became common practice to enclose stock within fences. As the Europeans took over Aboriginal grazing land, Indigenous hunters continued to visit the land, now populated with sheep.[491] With the increase in fine wool exports, the Europeans guarded their flocks more jealously, keeping them contained by oversight rather than by fencing. Their pastoral requirements increased as flocks grew and their maintenance became more careful. Therefore it comes as no

[490] Hamish Maxwell-Stewart, '"I Could Not Blame the Rangers ...": Tasmanian Bushranging, Convicts and Convict Management', *Papers and Proceedings: Tasmanian Historical Research Association* 42, no. 3 (September 1995): 109–26.

[491] This hearks back to Marie Fels' analysis of confrontations in the first decade of the settlement, but by this period the fight was about conflicting uses of land rather than kangaroos. Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'.

surprise that these stock-keepers on the furthest edges of the colony bore the brunt of the conflict.[492]

At the same time as the Black War, it became necessary, for the first time, to understand where property boundaries actually were. All of the settlement patterns, from the riverine intensive to the open extensive, are in part defined by their relationship with the surrounding land. Where riverine intensive and intermediate free plots were smaller, and usually neighboured another grant, the open extensive system saw them standing isolated in Crown land, with little (if any) neighbouring alienated land. Both patterns, the long-lot and the open extensive, used the surrounding Crown land freely, but it was the open extensive that took the most advantage of it. The furthest acres, those used for pasture, were the lands colonists (or rather, their labourers) were afraid to work on for fear of attack. These islands of open extensive found their surrounding Crown lands removed from general use, and the landholders found themselves obliged to measure and mark precise boundaries separating their land from their new neighbours'.[493] Meanwhile, the Survey Office was still struggling to fulfil its duties in a timely manner, undoubtedly leaving the settlers to complete this task themselves.[494]

The landscape evidence reveals that these remote settlements were constrained by fear and danger. On the 10th of November 1826, the *Colonial Times and Tasmanian Advertiser* published a long diatribe about the 'atrocities…committed by the Aboriginal natives' against the lives and property of individuals living in the 'remote districts.' It ended by calling for the government to take some 'decisive steps', as it would become 'impossible to keep stock on those distant runs in the interior' if a party of soldiers was not stationed somewhere close by. It related to its readers the story of a group of settlers' men who had fled their huts, abandoned the stock they oversaw, and were kept hostage by fear at Dr Ross's house north-west of Bothwell after James Scott (Mr Pitcairn's man) was 'butchered and mangled'. Apparently these hands would not leave to resume their duties until a military party arrived to provide protection. They refused to even to collect the sheep from the surrounding lands.[495]

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492 James Boyce, 'Fantasy Island', in *Whitewash: On Keith Windschuttle's Fabrication of Aboriginal History*, ed. Robert Manne (Black Inc, 2003), 54–56.

493 9 February 1829, George Frankland, *Five Letters from George Frankland in Van Diemen's Land* (Adelaide, S. Aust: Sullivan's Cove, 1997), 17.

494 9 February 1829, Frankland, 17.

495 10 November 1826.

The paper printed a correction two weeks later – a report that seven people had been murdered by the 'black Natives' was misinformed. However, just that week they had definitely committed 'violent outrages' against a group of sawyers at Cockatoo Valley. Another call to arms was issued, as the paper against beseeched the government to act, or the settlers of the interior would face a fate similar to that of the 'unfortunate inhabitants of the back-woods of America'.[496] The *Colonial Times* published several similar reports under the heading of 'The Natives', calling loudly for the removal of the Tasmanian Aboriginal people to King Island. 'When shall we be able to hear that the stock-keeper may collect his herd, and the shepherd his flocks, without the danger of being murdered?'[497]

These reports reveal the growing fears among those working on the remote lands. This period corresponds with the phenomenon observed at figure 81, that the late 1820s were characterised by undersize properties. As stated, there is nothing to suggest this is the result of systematic hostility faced by the surveyors. What then could have caused so many properties to be undersize, in a period of land pressure, when settlers were manipulating the system, or taking in marsh and any other scraps available? The answer here is fear. Not fear by the surveyors, but by the settlers themselves. The fears of the settlers have been categorised as 'economic', 'personal' and 'fear for others', as Nick Clements worked through the different responses from 'gentle uneasiness' to 'paralysing fear' felt by the settlers.[498] Settlers reported being driven from their properties, in a period that John West described as having 'considerable danger'. Despite the fortifications frontier properties installed against bushrangers, including loop-holes and guard dogs, the guerilla methods of the Tasmanian Aborigines drove settlers from their properties.[499]

When the land granting system was ended, and the Ripon Regulations enacted, quit rents were adjusted to accurately reflect the amount of land possessed by an individual.[500] As

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496 'The Natives', *Colonial Times and Tasmanian Advertiser*, 24 November 1826.

497 'The Natives', *Colonial Times and Tasmanian Advertiser*, 9 February 1827.

498 Chapter Four: Experience in Clements, *Black War: Fear, Sex and Resistance in Tasmania*, 94–109.

499 Efforts to calculate the effects of the Black War on land sales and settler movement into urban areas were thwarted by a lack of data. When a family abandoned their property and put it up for sale it would only appear in the data compiled for this research if it was actually sold. More interesting would be the properties that failed to sell at the height of conflict, as they would reveal the locations perceived to be most dangerous by the public. It might be possible to compare land sale advertisements with land purchase lists to identify unsuccessful sale patterns, but such a labour intensive study was beyond the remit of this thesis. West, *The History of Tasmania*, 100; Clements, *Black War: Fear, Sex and Resistance in Tasmania*, 102–3.

500 West, *The History of Tasmania*, 110–13; Rutledge, 'Stephen, A.'

Chapter Three noted, this does not explain why the LDC contain consistent discrepancies between the recorded and official acreages, but it does reveal that the surveyors were recording what they found on the ground. What they were finding and recording was a subconscious contraction from the edges by the settlers themselves, responding to their deep-seated fears. *Monmouth 56* (figure 82), shows a grant remeasured in 1836, and found Kemp's property to be short of 100 acres. The surveyor, Hughes, noted that the omitted land was flat and 'fit for cultivation'.[501] This was not poor hill land, rather it was valuable cultivable land. The exact causes of the swing in figure 81 may never be more than educated speculation, but the clarity of the pattern suggests it was caused by a response to circumstance rather than accident.

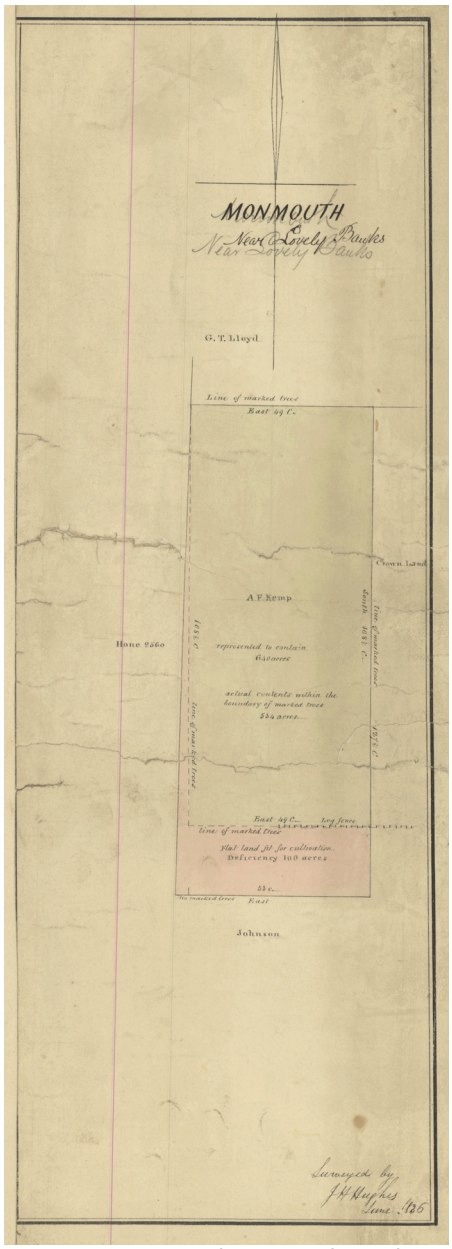

Figure 82: Monmouth near Lovely Banks, 1836 (Hughes, Monmouth 56).

Settlers contracted from the fringes of their grants, fearful of attack away from the safety of their homesteads. At the same time, the land grant system required landholders to guess at their boundaries, until they could be measured. Just as it became bureaucratically possible to gain large landholdings, it simultaneously became perceived as more dangerous to actually use them. There existed a fundamental paradox between the ability of settlers to claim and to use their land. Their greed for expansion is obvious, as they created land-grant islands within the Crown lands. Their ability to enjoy the wealth of land was hampered by their labourers' fear of the outskirts. As boundaries were solidified by neighbouring land alienation, it appears that this fear had a tangible impact on the shape of settlements, with properties consistently measured undersize at the height of hostilities.

[501] J.H. Hughes, *Monmouth 56: Near Lovely Banks*, 1836, 1836, AF396/1/264, TAHO, https://stors.tas.gov.au/AF396-1-264.

Fortune: Two colonial ways

Despite the fear that would come to shape some aspects of land grants, Van Diemen's Land was a place of opportunity for many settlers. Resources were privatised as a result of the increasing wealth and status within the colony, as individuals sought to establish themselves and stake their claim on the land. By the 1820s, the wealthy settlers in the colony were able to commission charts of their estates. These elaborate illustrations described the toil and aspirations of the landholder, although they remained quiet about those their estates have displaced, or the labourers responsible for the bulk of the work. Modelled on the estate maps of Britain, they might have been proudly displayed for all to admire the amount of land (and therefore wealth) contained within a property. It is likely that many remain lost to attics and cellars, but those that have made their way to TAHO unwittingly reveal many colonial secrets.

Beautiful in their own right, these charts also show what was important to those landholders who wished to be well-regarded. Their farms certainly contained working lands, but they could afford the luxuries of a pleasure garden as well. Each space was neatly delineated – they had successfully subdued the unruly bush. In 1823, Edward Foord Bromley engaged the services of a surveyor to create such a chart of his Lower Newtown Farm. A man of high standing in the community – on the board of the Van Diemen's Land Bank, treasurer of the Police Fund, magistrate – Bromley would soon achieve colonial notoriety as he was found guilty of stealing colonial funds. In September 1823, perhaps intoxicated by his fraudulent success, he commissioned twenty-two year old William Sharland to complete this work. Sharland had arrived in the colony two months earlier with his parents, and would become a long-serving employee of the Survey Office. At that time he was either unemployed or working as a clerk for Evans.[502] The resulting chart suggests he was a man with time on his hands, a point to prove about his skills, and a good pay cheque.

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[502] William Sharland arrived in July 1823, and was soon after engaged by the Survey Office. It is possible that this work was completed before his appointment. Arthur only informed Bathurst of Sharland's position in March 1825: Arthur to Bathurst, 1 March 1825 HRA III (iv), 242–43; P. R. Eldershaw, 'Bromley, Edward Foord (1777–1836)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/bromley-edward-foord-1829; 'Sharland, W.S.'


14 BUCKINGHAM
Mr. BRODRIBB
LAND
Mr. CLIFFORDS
Mr. HELLYER
LAND
LAND
BROWNING
BROWNING
BROWNING

These were probably the lands that were the most suitable for immediate cultivation when the land was first alienated. They had water access, but were also the lands that had been kept open by Aboriginal management. What differentiates Bromley's chart from others is the lack of cultivation. The 'High Field' is lacking the common visual indicators of cultivation – lines, shading, or an illustrated fence – that can be seen in other charts examined here. There is another part of the farm not illustrated, but it is more probable that Bromley grew crops on his other properties, not this one (if at all).

This chart contains detail about Bromley's property in New Town, but more importantly, it reveals how he wished his property to be seen. Bromley aspired to have a property that featured the most modern of British fashions. A guest would arrive and travel through a fenced park, kept oblivious to the unsightly elements of a farm. They would then be treated to views over a tidy garden, through which a creek gently babbled. If said guest wished to, they could stroll through the garden, over a footbridge, through the garden meadow and down to the rivulet, but would not be forced to endure its uncontrolled form. How the farm functioned in reality is not known. By 1826 Bromley had sold almost everything he owned to pay the damages made against him. In 1828 he sold 103 acres in Hobart to John Montagu, perhaps that was this property.[504]

Not all landholders yearned to create this British idyll on their properties. Other estate maps appear more authentic (or perhaps simply less aspirational) in their description of the landscape. In 1817 Anthony Fenn Kemp was granted 700 acres at Green Ponds, on the River Jordan. A successful colonial merchant, he was granted several more acreages around the initial Mount Vernon estate.[505] This is clearly visible on an estate chart surveyed in 1835, which shows clear evidence of the changes in land use that the estate went through in less than two decades.[506] This one does not bear the name of the surveyor, although it is quite clearly an estate plan, and it has a more utilitarian appearance. Triangulation points and survey lines are shown, but the key is incomplete.

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504 Eldershaw, 'Bromley, E.F.'

505 Murray C. Kemp, 'Kemp, Anthony Fenn (1773–1868)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/kemp-anthony-fenn-2294.

506 'Monmouth 51'.

Figure 84: A.F. Kemp's Mount Vernon Estate, 1835 (Monmouth 51).

The early riverine connections of the original grant are clear, as the house sat only 500 metres from the river, on the edge of a small wooded park. After nearly twenty years, Kemp had the means and motivation to create an impressive entrance to his property, one that would demonstrate his success in the colony to visitors. The driveway swept through a productive landscape of cultivated and fenced fields, and past a decorative garden before stopping at the front of the house. The working buildings are also here, hidden from the view of visitors by the garden. All the fenced fields are along the river boundary, while the back of the property is open for grazing. The conveyance records list Kemp's purchase of three other blocks in Green Ponds (along with many others across the island) between 1828 and 1833, of 1000, 800 and 400 acres. According to this chart Kemp held 3390 acres, but the grant and conveyance registers only record 3200 acres in this area (Appendix Nine). Not all the acreages recorded on the chart match those listed, revealing the internal reorganisation of his property between buying and charting it. Nonetheless, the original 700 acres is recognisable because of its intermediate free layout – set on the flat riparian land, with Mount Vernon (from which the estate was named) towards the rear. Its ratio is less than 1:3, but as the first grant in the area, it is likely that he took advantage of the

space available and the loosening regulations to claim more river frontage than was permitted in earlier years.

Figure 85: Charles McLachlan's Estate, 1820s (Woodward, Monmouth 90).

Where the original grant retained a connection to the river, later grants connected their layout to the roads. This shift of emphasis from rivers to roads is seen across the island, as later acreages lost their connection to the water carriages in favour of overland routes. This is better demonstrated on another chart – *Monmouth 90*, an estate map showing the lands of Charles McLachlan north of New Norfolk.[507] Here a bridle road is seen running from Marked Tree Road past a fenced field, stopping in front of the homestead, with its accompanying gardens. Surrounding this are several enclosed fields, some cropped and some fallow, their western edge defined by Bloomfield Creek which was probably used for early crop irrigation. Visitors to this residence could travel almost the entire route from Hobart overland, and the layout was targeted at this approach. In total, about 250 acres of McLachlan's property were enclosed when this chart was made, while the remaining 3200 acres were primarily laid out as pasture radiating outwards from the homestead.

Kemp's father was a merchant, and after several years spent travelling in the United States and France, Kemp joined the military. He first came to New South Wales as an ensign in 1795. Although he used his grants in Van Diemen's Land to establish a successful wool

[507] Surveyor George Woodward, who was only active in Van Diemen's Land between 1826 and 1828, Drown, 'An Apparatus of Empire', p.47.

business, he was able to rely on the agricultural expertise of others while using his merchant experience to maximise return.[508] McLachlan had similar experience, having been a plantation manager in the West Indies, before working for as principal agent for the Australian Co., overseeing the first regular shipping services between Britain and Australia. He had properties around Van Diemen's Land, and again engaged in some sheep farming, but the majority of his attention was focussed on mercantilism and public duties.[509] Edward Lord, discussed in previous chapters, came from a wealthy family with lands in Pembroke, Wales. Within only two years of first setting foot in the colony, Lord was a major stock-owner, supplying meat to the government. He became the largest landholder in Van Diemen's Land and was president of the Van Diemen's Land Agricultural Society.[510] Other landholders had less salubrious origins – Andrew Barclay who held properties on the South Esk River near Evandale, is remembered as a pirate and 'hard-swearing old sea dog' in the *Australian Dictionary of Biography*, but he used his merchant navy background and shrewd business acumen to build a successful sheep and cattle enterprise.[511]

These large landholders were not, however, typical of the first Europeans to arrive on the island, nor the first to farm it. The original British-born farmers were convicts, sent here from a variety of backgrounds. They underwent what Raby terms an 'apprenticeship' in Australia, adapting and learning quickly so that by the 1830s they were capable farmers in a very un-English environment.[512] James Dixon, a captain of the Scottish-origin ship *Skelton*, recorded his observations from an 1820 voyage to Australia, and opined that 'good practical farmers from England seldom do better, or even so well in the colony, as those who know little about agriculture.' His views on the colony were not entirely favourable, as he told his reader he would need to 'renounce even the society of the place he lands at', as

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508 Kemp, 'Kemp, A.F.'

509 David S. Macmillan and J. R. Morris, 'McLachlan, Charles (1795–1855)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/mclachlan-charles-2411.

510 Thea Rienits, 'Lord, Edward (1781–1859)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/lord-edward-2370.

511 G. H. Stancombe, 'Barclay, Andrew (1759–1839)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/barclay-andrew-1739.

512 Raby, *Making Rural Australia*, 66.

each settler would head into the distant interior to find land.[513] As Dixon was writing his observations, Bigge was also recording his impressions. The two accounts, written independently of each other, are in agreement on many issues, including the potential for emancipists to be productive on the land. Bigge was of the view that with 'diligence and industry' and and 'ordinary degree of skill' the colonists of Van Diemen's Land could transform the island into a hive of productivity.[514]

Both Dixon and Bigge compared the landscape they encountered in Van Diemen's Land to that of Britain. It was with disappointment that Dixon warned his readers that 'on landing, there will not be seen those fine fertile plains, filled with villages, farm houses, and other delightful picturesque scenes, which, in suitable seasons, the mother country presents…'[515] Breton wrote favourably of the lands in the north of the island, as the landholders were 'rapidly improving the appearance of their farms.' One person had planted acres of English grasses, while other were 'adopting a style of enclosure that would be admired in any country, namely a bank with a quickset hedge on it, and a double ditch.'[516] Of course, by 'any country', Breton is describing the hedgerows of England's recent parliamentary enclosures. There can be no doubt that visitors to the colony compared what they saw to what they knew, and their perception of what made a beautiful countryside. Their opinions were also coloured by the overarching colonial aim of creating the 'ghost acres' in overseas territories – in Van Diemen's Land this meant growing wool to supplement the comparatively small local acres available for such pursuits in Britain.[517] These reports, however, only reveal the views of visitors to the colony. Attitudes on the ground were at odds with those of occasional observers, particularly in the earliest years of the colony. These attitudes are apparent when the reality of life on a Van Diemonian land grant is examined.

Throughout the early modern period in Britain, every piece of cultivable land was brought into use, and still more acres claimed from fen and marshland through extensive drainage systems. The intense pressure on the land resulted in a high level of regulation, the

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513 Dixon, *Narrative of a Voyage to New South Wales and Van Diemen's Land in the Ship Skelton During the Year 1820*, 91–94.
514 Bigge, *Report on Agriculture and Trade in N.S.W*, 27, 27.
515 Dixon, *Narrative of a Voyage to New South Wales and Van Diemen's Land in the Ship Skelton During the Year 1820*, 91–94.
516 Breton, *Excursions in NSW, WA and VDL*, 1834, 308–9.
517 Pomeranz, *The Great Divergence*, 275.

popularity of crop rotation systems attests to this need for efficient land use.[518] In the British colonies, however, there was a surplus of land. While Britain struggled with unemployment and over-population, the New South Wales and Van Diemen's Land colonies possessed abundant acres, but had only a limited workforce and access to equipment. From the outset this created an entirely different culture of farming. On examining the colony, Bigge observed that it was possible that in 1820 there were too many convicts, but with the increasing numbers of free settlers in 1821, labour demand outstripped availability.[519] Geoff Raby noted that this imbalance resulted in a reversal of priorities in Australia – land wastage was acceptable, but labour and equipment were precious commodities to be used wisely. This led to a 'bush fallow' system, with land worked until it became leeched, then left to return to scrub for up to ten years, before being cleared and cultivated again.[520]

The equipment sent out throughout the first decades was rudimentary – where the agricultural revolution was associated with the introduction of new technology and approaches in Britain, the earliest settlers of New South Wales were reliant on hand tools that rapidly wore out. In a 1966 history of farm technology in Australia, Francis Wheelhouse explored the history of the colony through the equipment available to the people living here. While his understanding of Aboriginal agriculture is dated and inaccurate, he nonetheless built a compelling image of a colony pushing meagre resources to the limits, while begging the Colonial Office for help.[521] In an agricultural history of Australia, Ted Henzell noted that it took several decades for mechanical ploughing to become common, stating that even when the equipment was available, it was often more efficient to till the soil by hand because of the tree stumps left in the fields.[522] It is possible that Van Diemen's Land and New South Wales differed significantly on this point – Bigge declared that one of the advantages Van Diemen's Land had over New South Wales was that the stumps were often 'small, stunted, and scattered thinly, and afford slight impediments to the early use of the plough.'[523] His report does, however, largely focus on

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518 Rowell, 'The History of Drainage at Wicken Fen, Cambridgeshire, England, and Its Relevance to Conservation'; Williamson, *The Transformation of Rural England*, 103–5. See also: Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500-1850*.

519 Bigge, *Report on Agriculture and Trade in N.S.W*, 30.

520 Raby, *Making Rural Australia*, 40, 49; Henzell, *Australian Agriculture: Its History and Challenges*, 8.

521 F. Wheelhouse, *Digging Stick to Rotary Hoe: Men and Machines in Rural Australia* (Australia: Cassell, 1966).

522 Henzell, *Australian Agriculture: Its History and Challenges*, 7–11.

523 Bigge, *Report on Agriculture and Trade in N.S.W*, 27.

the negatives of agriculture on the island. This could be read as a pointed comment about the unrealised potential of the land, or an attack on the policy of awarding land to emancipists and their children.

The first European arrivals were so different from their successors that thinking of them as 'colonists' or even 'settlers' is unhelpful – these terms are loaded with the implications of expansion, alienation, and oppression. Although the earliest British arrivals were not innocent of violent expansion, most of them came under very different circumstances which were then reflected in how they responded to their land grants. Early land allowances were conservative, increasing only as demand and opportunity allowed. The scale of acres given to emancipists was always lower than what was given to military or free settlers (figure 26), and acreage was directly connected to status from the time of the earliest settlement – emancipists were ranked lower than military settlers, and thus thirty acres was inferior to fifty.

The emancipist grantees were individuals shipped to the colony against their will, who had no choice but to build a life for themselves that must have looked very different to anything they had imagined for themselves. They took the land that was offered, fed from it, and expanded their families, but by British standards of the time they did little more than subsist. Naturally, there are exceptions, such as David Gibson who increased his holdings from a basic emancipist grant to about 14 000 acres by 1828, while also gaining the respect of society despite his convict background.[524] Likewise, while still under conviction, Judah and Joseph Solomon manipulated the system to circumvent restrictions on convicts holding alcohol retail licences, or receiving remuneration for work. By negotiating a complicated system of trade and barter, they managed to run a successful general store that served the people of Hobart, and Joseph went on to be a highly esteemed member of society.[525]

It was not until the colony was opened for free settlers that the notion of large estates gained a strong foothold in Van Diemen's Land. Large acreages had been granted to some

[524] M. Gibson, 'Gibson, David (1778–1858)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University, 1966), http://adb.anu.edu.au/biography/gibson-david-2091.

[525] Judah's legacy was more contentious, as he became embroiled in messy divorce proceedings, and he and his wife (Esther) sought to blacken each other's reputations. Hamish Maxwell-Stewart, 'Land of Sorrow, Land of Honey: Aspects of the Life of Judah Solomon (c.1777–1856)', in *A Few from Afar: Jewish Lives in Tasmania from 1804*, ed. Peter Elias and Ann Elias (Hobart Hebrew Congregation, 2003), 13–20.

of the first Europeans in Van Diemen's Land, for example Edward Lord, who had accumulated 600 acres by the end of 1808, a very large quantity by the standards of that time.[526] While he was not alone in seeking to create a large estate, such large grants were the exception rather than the rule in the first decade. They were usually given as a reward for service to the government – for example the surgeon Matthew Bowden received 500 acres from Macquarie for his hard work, and the Inspector of Public Works George Gunning received 1300 acres in the Coal River after resigning from that position.[527]

When Bigge suggested the colony limit the minimum grant size in 1823, he was reporting on changes already occurring rather than voicing new ideas. The case of Kemp exemplifies this: his 700 acre grant was very large at the time, but between 1817 and 1821 the average new landholding was 250 acres. This included eighty-five (of 228) grants under fifty acres. If only those that are over fifty acres are counted, the average new acreage was 380.[528] This was when the transition from riverine intensive properties to open extensive moved swiftly. There is no evidence to suggest it developed from the aspirations of the emancipist landholders, although they were restricted by both regulation and social hierarchies, and their goals may have been impossible to realise. While the open extensive pattern represented a continuation of the colonial goals that led to the settlement of Van Diemen's Land, the individuals setting them out were not connected to the riverine intensive properties. They represented a new class of settlers, influenced by different factors.

In 1827 the editor of the *Colonial Times*, government critic Andrew Bent, wrote that a want of assigned servants was a 'blight' on 'the energies of the industrious farmer' that left 'the improvement of the soil in a miserable plight.'[529] He vehemently argued that the lack of labour left settlers incapable of fulfilling the obligations they had to cultivate the land, while also preventing many from subsisting on their own properties. With a dramatic flourish he

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526 Rienits, 'Lord, E.'

527 'Bowden, Matthew (1779–1814)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/bowden-matthew-1808; F. C. Green, 'Gunning, George Weston (1772–1845)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 21 March 2017, http://adb.anu.edu.au/biography/gunning-george-weston-2136.

528 These numbers are taken from all available records of land grants across the island. These constraints were chosen because 1817 represents the year that free settlers were officially encouraged to come to the colony, and 1821 the final year in which Bigge was collecting evidence in the colony.

529 E. R. Pretyman, 'Bent, Andrew (1790–1851)', *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 9 January 2017, http://adb.anu.edu.au/biography/bent-andrew-1771; Bent, *Colonial Times*, 11 May 1827.

declared this 'tremendous void' would spread 'ruin and desolation' among the settlers, and therefore the colony. He concluded that the Public Works could hire labourers under contract, where settlers could not afford to. In 1828 John Lakeland, the Principle Superintendent of Convicts, stated he had 'not 30 men who can with any degree of propriety be assigned away to the Settlers', while he had settlers applying for more than they needed in the 'hope of obtaining some at this time'.[530] Two years later Arthur requested at least 1000 more men, calculating that he could probably assign at least 2000 convicts over the following year.[531]

By the early 1830s, Lord had expanded his Lawrenny Estate on the River Derwent to 14 000 acres. He utilised an accepted symbol to announce the privatisation of the land, with Breton recording that the 'whole of [it] is fenced in'. But he took a Van Diemonian approach to the working of it – it was 'very little cultivated.'[532] In one sentence, Breton revealed how British ideals had been twisted to fit the colonial context. Lord used fences to contain his stock, but also to demarcate his territory and exclude those who were not welcome. The extent of his land was made clear, by the length of fencing required, as was his wealth: not only did he have vast acreages, he could afford to pay men to fence it, or had access to abundant assigned labour. Although extensive fencing was more common by this stage, it was still expensive and not ubiquitous.[533] The extent of fencing at Lawrenny operated as a status symbol for both Lord and his successful industry. These were working fences, keeping valuable sheep contained to prevent their escape and breeding with stock of lesser quality.

At Lawrenny, the lack of clearing was quintessentially colonial. Lord was afflicted by labour shortages, as was the rest of the colony. While Lord could manage the enormous, but necessary, task of fencing his property, clearing the land was not a priority. Breton admired the 'fine sheep-walks' of Lawrenny, but thought a more worthwhile use of the land would be agriculture. He dismissed the prioritising of sheep over cultivation, suggesting that while it fed 10 000 sheep at that time, the number would only diminish by two or three

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530 Enclosure No. 2 - Return of Assigned Servants, 1 May 1828, HRA III (vii), 301–2.
531 Arthur to Twiss, 17 August 1829, 573.
532 Breton, *Excursions in NSW, WA and VDL*, 1834, 314.
533 As seen in earlier discussion about the growing market for fencers, and increasing advertisements for fenced properties. See also: Blomley, 'Making Private Property: Enclosure, Common Right and the Work of Hedges'.

thousand if some of the fine soils were turned to crops.[534] Lord's wealth, however, was dependent on wool exports, and his estate reflected the need for sheep to have grazing and shelter from the Tasmanian extremes, and the associated lack of desire to create open fields of grain.

Bigge's derisive views on the general lack of improvements should be read as a comment on farming priorities. With a small property and some support from government stores, the emancipists were forced into a community along the river edges. They were fulfilling their role of 'improving' and cultivating the land, as both international law and Christian duty required, without any apparent enthusiasm to do more than was required.[535] This model was intended to keep the emancipists occupied and under surveillance, while also providing supplies for the government, and it achieved that.[536] But Bigge's criticisms reflected changing views on agriculture and the priorities of its practitioners. The riverine intensive pattern, used under governmental instruction by the emancipists and earliest free settlers, relied on polycultural farming. This reflected British practices, where the cycle of land use included periods of letting the land lie fallow and then fixing nutrients in the soils by putting animals to pasture on it.[537] With their thirty to eighty acres, farmers in Van Diemen's Land were focussed on feeding their families and supplying the excess back to the government stores. As the wheat and wool markets expanded into serious enterprises, it was important to maintain high quality agricultural output. The need to refertilise the soils through grazing on them was found to be unnecessary and impractical; fences were built and the different crops and stock were separated.[538] These were the changes heralded by Bigge.

Despite Dixon's assertion that a convict could be more successful in the colony than a well-experienced farmer, it is likely that many emancipists sold their acreages and moved into the urban settlements.[539] This may have been out of necessity, as they found themselves unsuited to the agricultural life, but possibly they also found opportunities to earn a better

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534 Breton, *Excursions in NSW, WA and VDL*, 1834, 314.
535 Locke, *Two Treatises on Government*, 209–30; Reynolds, *A History of Tasmania*, 33.
536 Examination of G.W. Evans, 22 March 1820, HRA III (iii), 319; Karskens, *The Colony*, 118; McGillivery, 'Convict Settlers, Seamen's Greens, and Imperial Designs at Port Jackson'.
537 Raby, *Making Rural Australia*, 41.
538 Henzell, *Australian Agriculture: Its History and Challenges*, 8; Raby, *Making Rural Australia*, 40–41.
539 Dixon, *Narrative of a Voyage to New South Wales and Van Diemen's Land in the Ship Skelton During the Year 1820*, 91–94.

living by becoming (or returning to being) traders, shopkeepers, or tradesmen in the urban centres. This research has not been able to examine the movement of people from rural to urban environments beyond the most basic of analysis, but contemporary reports told their readers that 'large capitalists' were buying up these small properties to make up their estates.[540]

What is clear in both the work of the emancipists and the free settlers is that they were responding to local conditions. M. Gibson in the *Australian Dictionary of Biography* entry for David Gibson asserts that his success in farming suggests he had some farming experience from his youth.[541] Henzell grants all nineteenth-century Britons some familiarity with sheep because of a ubiquitous ovine presence in all marketplaces, urban and rural.[542] Both authors attempt to explain the success of individuals and enterprises in the colony of Van Diemen's Land in terms of pre-transportation knowledge of farming practices. There cannot be any doubt about the influence of Britain on the shaping of agriculture – emigrants were reliant on seeds, animals and knowledge coming from the Empire. But despite Tasmania's many similarities to the British Isles, it is a different place, and the settlers were quick to adapt their base-knowledge to the new circumstances. By starting from scratch, without established European land-uses or a well-experienced work force, with minimal equipment, and with vast spaces, the settlers of Van Diemen's Land created their own system, an amalgamation of old wisdom and new lessons from both sides of the world.

Conclusion

This chapter has seen how the progression of Van Diemen's Land settlement patterns, from the smallest emancipist riverine intensive, through the larger intermediate free grants that conferred the same riparian benefits across more acres, to the ever-expanding open extensive plots, tells its own story. And this is a story of expansion, first informally across Crown lands, and then officially, as those acres were slowly alienated. The Tasmanian Aboriginal people were the first to lose this land, but landholders with insufficient acres to house their stock found themselves constrained through the 1820s. This led to the creation

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[540] Bigge, *Report on Agriculture and Trade in N.S.W*, 36.
[541] Gibson, 'Gibson, D.'
[542] Henzell, *Australian Agriculture: Its History and Challenges*, 53.

of Tasmanian traditions: landholders found creative ways to manipulate the system to their benefit, and priorities were reordered to manage local conditions.

As the Europeans usurped more and more land, their ambitions of wealth were matched only by a growing climate of anxiety. Charts from this period contain suggestions of fear among the settlers, as they responded to increasing hostilities between themselves and the Tasmanian Aborigines. Observing European fear is not to minimise the tragedy of the Black War, after all fear can create the most violent response in all living creatures, but it returns to the argument made in Chapter Three that some responsibility for inaccurate charts and boundaries belongs with the settlers.

Van Diemen's Land comprised two patterns that were the antithesis of British farming ideas. Although created under governmental instruction, riverine intensive properties came to represent the free settlers' growing dislike of emancipist settlers. They were seen as lacking the 'diligence and industry' to make a success of their acreages.[543] These properties were small, and the latest agricultural techniques were not applied. There was little that an observer (who considered himself to be agriculturally enlightened) could approve of. As more of these enlightened observers became settlers, however, they also quickly adjusted their techniques to Van Diemonian conditions, and became disappointments to their own observers.

Large estates, such as Lawrenny, featured far more nature than even the strictest adherent to the 'natural' landscape design could admire. These sprawling properties economised labour over land and, with many acres minimally or entirely unfenced, they evoked the idea of pre-enclosure England. While Britain organised and enclosed, the colony rejected these philosophies in lieu of a proto-Australian laissez-faire approach. For the outside observers this was anti-modernisation. But these observers were ignoring the circumstances of rising food prices and diminishing commons that propelled change in Britain. Any self-reflection only confirmed their belief in the superiority of British agricultural arrangements.

[543] Bigge, *Report on Agriculture and Trade in N.S.W*, 30.

Conclusion:
A Whole New World

Over the course of seven chapters, this thesis has told the story of the Europeans who came to Van Diemen's Land and irrevocably changed it, creating the Tasmania of today. Relying on the evidence of visitor records and government policies to assess the colony of Van Diemen's Land reveals a different world from that which existed in reality. By looking at the progression of different settlement patterns through a thirty-year period, the detail of implementing official instructions becomes more clear. This thesis has revealed the differences between what observers saw and what settlers lived, as land was alienated and the resources on it privatised. It has highlighted that emancipist and free settler approaches to the land were informed by contradictory priorities, but that large scale expansion was only possible because of the foundations laid by the emancipist settlements.

As it opened, this thesis asked three questions which have formed the core of this research. The first question asked not only what the colonial expectations for land grants in Van Diemen's Land were, but also how they were realised. Expectations were dependent on the status of the landholder, and it is therefore near impossible to disentangle this from the second question, which asked how the grants given to former convicts and free settlers were different.

Initially, the settlement was guided by the instructions sent out with Governor Phillip, and blocks of riverine intensive grants were established along navigable rivers in the north and south of the island. Until 1830, this was the only time that there was any real attempt to rigorously apply governmental instruction. These were the lands granted to former convicts, a class of persons the government wished to overtly surveil. This pattern had been tested around the world, and was particularly effective for a penal colony because it kept the landholders within the grasp of colonial powers. As well as providing access to water for transport and irrigation, distributing the good and bad land evenly, it also kept the settlers close together, enabled them to pursue self-sufficiency while at the same time having the security of neighbours close by should danger or disaster strike.

The long-lot layout was not only beneficial for emancipists and the ruling bodies however, and the continuation of it into the free-settler period attests to the significance of riparian land in the burgeoning colony. By reviewing land grants, not as lists but as mapped boundaries, similarities between the emancipist and first free settler land choices have become clear. Without reliable overland road systems, the early colony was primarily

reliant on rivers to move people and goods about. Later, settlers would reprioritise their water dependency, but initially they were just as bound to waterways as the emancipists. In each of the case studies the first acreages were shaped as river-edge long-lots, with settlers moving away from the water as these lands became more scarce. Eventually this led to a class distinction, with the flat riparian land granted out to the almost complete exclusion of the hills. It was only in the mid-nineteenth century, and after the Ripon regulations, that the inferior hills were sold as smaller parcels of land. The open extensive pattern, however different it appeared to the riverine intensive, was still reliant on that earliest stage. Without the emancipist settlement at New Norfolk, the land further upriver, beyond the rapids, was beyond the reach of the Europeans.

The landscape of Tasmania is characterised by water and peaks, but between the two are acres that are neither river-edge or hill-slopes. These were the acres sought by the free settlers laying out their open extensive grants. By the 1820s, as increasing numbers of free settlers arrived, grantees took more liberties with their land choices. The settlers and the Survey Office implicitly and explicitly rejected ideas of rectilinear grants, choosing instead to optimise their grants with irregular boundaries and expansion over surrounding Crown lands. This gave them greater resources, but the danger also increased, as these widespread acreages formed an erratic frontier of unpredictable skirmishes.

As the settlements expanded across the island, the Survey Office bore the brunt of the (European) pressure. The target of hostility and accusations, the Office felt the impact of both colonial deficiencies and expansion as it struggled to complete the work required of it. The result was charts that were inaccurate, due to incompetence, deficient equipment, and corruption. This research has shown, however, that not all the fault belongs with the surveyors. As much as critics may have blamed the surveyors, some responsibility must lie with the settlers as they manipulated the system, sometimes intentionally to their own advantage, and sometimes as an unacknowledged response to circumstance. The Europeans became fearful of attack by the Tasmanian Aborigines who had been pushed even further to the fringes. A hunger for large acreages collided with the 'ubiquity of fear', as Nick Clements phrased it, and thus the outermost edges of properties were underestimated when it was time to mark them out.[544]

[544] Clements, *Black War: Fear, Sex and Resistance in Tasmania*, 96.

Unwittingly, however, the Europeans were mimicking the land use of the Tasmanian Aborigines. The first occupants of Tasmania had established a mosaic pattern of open and forested land, managed for particular purposes. The open lands were attractive to the Europeans, who sought lands that could be put to immediate cultivation. There has been a tendency to depict land granting as a continuous flow of Europeans out across the land, but this research has demonstrated that the reality was more patchy. Landholders jumped across forested areas to a clearing and claimed it, creating a network of grants connected by the tendrils of rivers and roads, rather than a solid block of occupation. Their sheep spread out over the surrounding Crown land in a web of informal alienation, before being pressed back within the official boundaries as new arrivals took up those acres for themselves. On arrival the settlers were immediately drawn into these fire-stick farmed areas, perhaps the most intensively managed Aboriginal lands, intent on 'improving' the land. The Europeans based their settlement of Van Diemen's Land on John Locke's theories of land ownership, at the centre of which were principles of developing the land in order to rightfully claim it. This irony led to tragedy, as the Europeans pushed the Tasmanian Aborigines off these hunting grounds, away from their centres of food and resources. While the scale of European expansion was destructive for Aboriginal lands, it was, as Marie Fels argued, the details of what was lost that drove the colony to war.[545]

The third question asked whether land choices by the Europeans could be used as a guide to uncovering the landscape they found, the *Trouwanna* they overwrote. This research has shown that there were consistent choices made by the settlers, based on environmental conditions which reflected some man-made elements of the Aboriginal landscape. A map of the earliest settlements in Van Diemen's Land therefore also unintentionally maps aspects of *Trouwanna*. This methodology draws attention to areas that are underrepresented in more traditional historical records, especially those that are smaller, such as the Back River settlement of New Norfolk. Combining consideration of European environmental priorities with an understanding of Indigenous uses of fire, can develop a more nuanced image of Aboriginal Tasmania.

By using GIS to uncover these patterns of land-use and alienation this research has developed an image of settlers creating a space for themselves in an unfamiliar place. It has

[545] Fels, 'Culture Contact in the County of Buckinghamshire, Van Diemen's Land 1803–11'.

moved beyond taking government instructions or visitor reports at face value, and instead interrogated the evidence to learn about the point at which emancipists, free settlers, bureaucracy, Tasmanian Aborigines, and the Tasmanian landscape intersected. It reveals that rather than attempting to mimic Britain in their farming, the settlers recognised similarities and adapted the knowledge they brought to create techniques that suited the Tasmanian environment. Built on the initial stage of emancipist subsistence farming, the later stages incorporated more 'traditional' elements that replicated a British appearance. Later settlers aspired to make their fortune from the land, but a sense of pragmatism moderated all but the most ambitious of settlers' actions. The motivations and influencing factors affecting the choices of settlers reveal a complicated bureaucracy and hierarchy affecting not only the landholders, but those regulating them as well.

Violent, oppressive, and alienating, the colonial history of Tasmania is not beautiful. The arrival of the Europeans represented an end of one era, but this research shows that there was also unacknowledged continuity in this period. Each group of people was reliant on those who had preceded them. The Europeans themselves were transformed by the very landscape they sought to assert their dominance over. The result was a colony that superficially echoed Britain, but was firmly underpinned by those elements that made it different rather than the same.

Further research

This research raises new questions about the practical workings of the colony of Van Diemen's Land. The gaps in our understandings of how colonial farms operated have been highlighted, particularly the poly-cultural emancipist grants. How these farms were organised, their potential and real output, and the sharing culture of working animals and tools are questions of interest. Taking a closer look at the layout of these properties, and how that changed over time, would reveal new information about the movement through settlement stages as properties adapt to new circumstances and capabilities. It is hypothesised that the transition from rivers to overland roads would have a strong influence, not only in the orientation of buildings, but also in the daily workings of the farm.

The methodologies developed in this thesis could also be expanded to interrogate the allegations of preferential treatment given to particular settlers, especially around land grants. With a larger sample of dated properties, it would be possible to align the under- and over- size properties with profiles of their landholder. This leads into larger questions about colonial favouritism and inter-colonial influence around the British Empire. How did earlier colonies shape the settlement patterns instructions brought to Australia?

This thesis has also established the foundations for further research, much of which would benefit substantially from an expansion of the history discipline's GIS capabilities. Spatial analysis is an under-utilised tool in the examination of colonial settlement practices, particularly in Australia, but this thesis demonstrates its power for re-visualising the landscape. With the increasing availability of open-source GIS software and tutorials, these methods are becoming more accessible and should be welcomed into historical research. At a very practical level, this will mean incorporating GIS training into degree programs and professional development courses, and allowing for data storage in project planning.

How we share HGIS data and maps also needs to be considered. HGIS's greatest strength is in its ability to re-create historical landscapes digitally, revealing histories that have previously been hidden in vast quantities of text. Maps can be an accessible mechanism to help non-experts understand the story, and experts to see it a different way. This does mean we need to engage with digital repositories and unfamiliar software, but in order to better understand the old, it can be very useful to embrace the new.

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Appendices

Appendices One to Seven (digital)

These appendices are intended to enhance the still images contained within this thesis. They can all be accessed at: http://arcg.is/2kZYVLd

Appendix One: Introduction to the Digital Appendices
Appendix Two: Main settlement patterns discussed
Appendix Three: Monmouth 36, original georeferenced
Appendix Four: Monmouth 36, redrawn
Appendix Five: Population of the Derwent settlement in 1819
Appendix Six: New Norfolk 1820s, as a 3D flyover
Appendix Seven: Midlands of Tasmania (Monmouth 65) as a 3D flyover

Appendix Eight: The Land Systems of Tasmania

From: J.B. Davies, Land Systems of Tasmania: Region 6 (Hobart: Tasmanian Department of Agriculture, 1988), 7–9.

Each land system has a six figure code which is used to locate the land system description and diagram in the text. The land systems are ranked numerically by code … and provide general information on rainfall, geology, altitude and land form as defined below:

First digit: Approximate Average Annual Rainfall
The first figure indicates average annual precipitation. This tends to be most accurate in areas with low rainfall gradients and least accurate in regions with high rainfall gradients or where little meteorological data is available. The lowest rainfall areas start with the codes 1--- and 2--- whilst the highest rainfall areas begin with 5---, 6--- and 7---.

375 – 500 mm (15 – 20″)	1
500 – 625 mm (20 – 25″)	2
625 – 750 mm (25 – 30″)	3
750 – 1000 mm (30 – 40″)	4
1000 – 1250 mm (40 – 50″)	5
1250 – 1500 mm (50 – 60″)	6
1500 – 2000 mm (60 – 80″)	7

Second digit: Geological Period
The second digit identifies the geological period of the predominant rock type or unconsolidated material for the Quaternary period.

Precambrian	1
Cambrian	2
Ordovician	3
Silurian	4
Devonian	4
Lower Devonian – Tremadocian	5
– Cambrian? (Mathinna beds)	5
Carboniferous	6
Permian	6
Triassic	7
Jurassic	7
Tertiary	9
Quaternary	9

Third digit: Rock type (or apparent parent material of Quaternary deposits)
The third digit separates igneous, sedimentary and metamorphic rock types. Further subdivision separates acid igneous (e.g. granite) from basic igneous (e.g. dolerite, basalt) rocks. Sedimentary rocks are subdivided according to particle size and chemistry. Argillaceous (e.g. mudstone) refers to fine grained rocks while arenaceous (e.g. sandstone) refers to medium grained rocks and rudaceous (e.g. conglomerate) to coarse rocks. Areas of complex geology which are difficult to place into any one of the categories are catered for by a "complexes of the above" category.

Acid igneous (e.g. granite)	1

Basic igneous (e.g. dolerite, basalt)	2
Sedimentary arenaceous (e.g. sandstone)	3
Sedimentary argillaceous (e.g. mudstone)	4
Sedimentary calcareous (e.g. limestone, dolomite)	5
Sedimentary rudaceous (e.g. conglomerate)	6
Metamorphis (e.g. quartzite, schist)	7
Complexes of the above and/or peat deposits	8

Fourth digit: Altitude
The fourth digit indicates the approximate altitude of the land systems.

(N.B. In some localised circumstances areas of land within a land system may be better represented by adjoining altitudinal classes to that actually specified by the code.)

0 – 300m (0 – 1000 ft)	1
300 – 600m (1000 – 2000 ft)	2
600 – 900m (2000 – 3000 ft)	3
900 – 1200m (3000 – 4000 ft)	4
1200 – 1500m (4000 – 5000 ft)	5

Fifth digit: Topography
The fifth digit describes the characteristic topography occurring in the land system. Some degree of subjectivity is involved in this coding.

Flat plains	1
Undulating plains	2
Low hills (<100 m)	3
Hills (100 – 300 m)	4
Mountains (300 m+)	5
Coastal dunes and beaches	6

Sixth digit:
This is used as a means of subjectively separating land systems generally based on variation in soils and vegetation where the first five digits are identical.

Appendix Nine: Identified Land Grants and Sales

A simplified list of the acreages identified within the case study regions in this research. Although some other dates were identified later in the research, the decision was made not to update these particular lists. This was to protect the integrity of this data by avoiding introducing inconsistently applied new sources.

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Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
John Leake		Campbell Town / Ross	Granted	0	1832		Walter Davidson	0	940	1.01	Open extensive		
Henry Lloyd		New Norfolk	Granted	0	0			0	864	1	Open extensive		
WIlliam Smith		New Norfolk	Granted	0	0			0	31	0.95	Riverine intensive		
J. Aitkin	T. Williams & John Sinclair	Evandale	Granted	0	0			500	513	0			mortgage
J.T. Read		New Norfolk	Purchased	0	1835	J.Turnbull		0	84	1.18	Uncategorised		500 acres in sales, the other part elsewhere.
Edward Nicholas		Bothwell	Granted	0	0			800	787	1.02	Open extensive		
M.A. Cleary		Evandale	Located	0	1835		James Thompson	50	18	0	Patchwork		
George Collins		Evandale	Granted	0	1831	David Gibson		200	226	0	Patchwork	Stieglitz, A History of Evandale, p.15	
Thomas Anstey		Bothwell	Granted	0	1833	William Fletcher		1000	1051	0.95	Open extensive		
J.A. Dunn		Bothwell	Purchased	0	0			460	466	0.99	Intermediate free		
P.G. Barns		Campbell Town / Ross	Granted	0	0			0	678	1.01			With T. Dykes and J. Dykes
Edward Dumaresq		Evandale	Granted	0	1835		G. Cooke	1054	1047	0	Open extensive		1000 acres listed

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Patrick Wood		Bothwell	Purchased	0	0			687	673	1.02	Open extensive		
Edward Bisdee		Bothwell	Granted	0	0			1010	958	1.05	Open extensive		
Edward Bisdee		Bothwell	Granted	0	0			640	619	1.03	Intermediate free		
David Gibson		Campbell Town / Ross	Granted	0	1827	Evans		510	616	0		Land Commissioners ' Journal	
David Gibson		Campbell Town / Ross	Granted	0	1827	Evans		285	265	0		Land Commissioners ' Journal	
David Gibson		Campbell Town / Ross	Granted	0	1827	Evans		465	515	0		Land Commissioners ' Journal	
P. Russell		Bothwell	Purchased	0	0			640	659	0.97			
J. Bisdee		Bothwell	Purchased	0	1835	James Hoyle, Thomas O'Brian, Martha and Thomas Axford		55.25	56	0.99	Uncategorised		50 acres listed
Patrick G. Barns		Campbell Town / Ross	Purchased	0	0			0	797	0.95			Also names Thomas Dykes and John Dykes
Patrick Graham Barns		Campbell Town / Ross	Purchased	0	0			0	1719	1.01			Also names Thomas Dykes and John Dykes
Edward Hammant		Evandale	Granted	0	1831		J. Archer	150	159	0			300 acres sold by Thomas Hammant, in Norfolk Plains. This was possibly part of that.

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Patrick Graham Burns		Campbell Town / Ross	Granted	0	0			0	10307	1			Also names Thomas Dykes and John Dykes
G. Hodge		Evandale		0	1829		Edward French	30	21	0	Patchwork		"Hodges" named, 30 acres sold in Launceston. This property very close to Launceston.
J. Mackersey		Campbell Town / Ross	Granted	0	1832	Temple Pearson		0	517	1.01	Open extensive		Pearson the broker between Mackersey and Bridger
M.M. Salter		New Norfolk	Purchased	0	1831	John Brawning		0	30	0.95	Uncategorised		"James Salter" listed
H. Hopkins	A. Morrison & T. Giblin	Bothwell	Purchased	0	1828	Charles Franks		634.5	641	0.99	Open extensive		700 acres
J.H. Patterson		Bothwell	Granted	0	1833	Adam Thomson		300	320	0.94	Open extensive		
J.N. McLeod		Evandale	Granted	0	1831		John Sinclair	309.25	306	0	Patchwork		"Donald McLeod", 300 acres listed
P. Wood		Bothwell	Granted	0	1834	G.W. Evans		105	102	1.03	Open extensive		
Patrick Wood		Bothwell	Granted	0	1834	G.W. Evans		200	199	1.01	Open extensive		
Patrick Wood		Bothwell	Granted	0	0			510	528	0.97			
Patrick Wood		Bothwell	Granted	0	1826	Jas Scott		1202	1093	1.1	Open extensive	Monmouth 119, AF 396/1/328	
Edward Archer		Campbell Town / Ross	Purchased	0	1832		J. Thomas	0	791	1.01	Open extensive		
John Thompson		Bothwell	Purchased	0	1835	John McRa		800	773	1.03	Intermediate free		
Thomas Archer		Campbell Town / Ross	Purchased	0	0			0	4120	1.02	Open extensive		

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
J. Saltmarsh		Evandale	Granted	0	0			25.5	27	0	Patchwork		
David Gibson		Campbell Town / Ross	Granted	0	0			0	616	0.83	Intermediate free		
W. Saltmarsh		Evandale	Granted	0	0			107	128	0	Patchwork		
William Evans		Bothwell	Located	0	0			1000	1104	0.91			
Richolds		Campbell Town / Ross		0	0			0	51	0	Intermediate free		
David Gibson		Campbell Town / Ross	Granted	0	0			0	265	1.08	Intermediate free		
David Gibson		Campbell Town / Ross	Granted	0	0			0	515	0.9	Open extensive		
Gibson		Campbell Town / Ross		0	0			0	36	0	Intermediate free		
		Campbell Town / Ross		0	0			0	37	0	Intermediate free		
James A. Youl		Campbell Town / Ross	Granted	0	0			0	767	0.95	Open extensive		
Charlotte Youl		Campbell Town / Ross	Granted	0	0			0	514	0.95	Open extensive		
M. Trenery		Evandale	Located	0	1830		James Ranken	320	346	0	Patchwork		
John H. Wedge		Campbell Town / Ross	Purchased	0	0			0	764	0.94	Open extensive		
James Scott		Bothwell	Purchased	0	0			1847.25	1850	1	Open extensive		
Patrick Wood		Bothwell	Granted	0	0	W. Paton / W. Gardiner		1340	1291	1.04	Intermediate free	Monmouth 129, AF 396/1/338	
William North		Bothwell	Granted	0	0	F. Taylor		400	403	0.99	Intermediate free	Monmouth 129, AF 396/1/338	

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Thomas Archer		Campbell Town / Ross	Granted	0	0			0	2308	1.57	Open extensive		
Thomas Archer		Campbell Town / Ross	Granted	0	0			0	534	1.22	Open extensive		
Thomas Augustus Wolstenholme	Henry Goodford	Bothwell	Granted	0	0			2300	2248	1.02	Intermediate free		
Patrick Wood		Bothwell	Purchased	0	0			640	646	0.99	Open extensive		
John H. Wedge		Campbell Town / Ross	Purchased	0	1826	T. Nowlan		717	764	0		Land Commissioners ' Journal	
Child of the late Sergeant Blossom		Bothwell		0	0			200	212	0.94	Intermediate free		
William Clarke		Bothwell	Granted	0	1832	Edwin and Mary Bath Nowell		400	69	5.8	Uncategorised		
Anthony Norwood Archer		Bothwell		0	0			1630	1579	1.03	Open extensive		
H.M. Howells		Bothwell	Granted	0	1834	Catherine and William Newman		60	52	1.15	Riverine intensive		
Frederick Synnot	Walter Synnot	Bothwell	Granted	0	0	Dd Thompson		4040	4172	0.97		Cumberland 23, AF 396/1/1347	
Roderick McKenzie		Bothwell	Granted	0	1835	Duncan McRa		1200	1187	1.01	Intermediate free		
George Meredith		Campbell Town / Ross	Granted	0	0			0	1025	0.98			
A. Rainbird		New Norfolk	Purchased	0	0			0	74	0.92	Patchwork		

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
T. Shone		New Norfolk	Located	0	1829	C. Clarke / J. Welsh		0	60	1.01	Riverine intensive		Two lots of 30 acres
J.T. Gellibrand		New Norfolk	Purchased	0	1828	R.W. Loane and Lascelles		0	368	1.09	Open extensive		500 acres sold, probably in two sales
J. Cassidy		Campbell Town / Ross	Granted	0	0			0	99	0.6	Intermediate free		
J. Cassidy		Campbell Town / Ross	Granted	0	0			0	232	0.95	Intermediate free		
J. Cassidy		Campbell Town / Ross	Granted	0	0			0	112	0.98	Intermediate free		
J. Cassidy		Campbell Town / Ross		0	0			0	281	1.07	Intermediate free		
J.T. Gellibrand		New Norfolk	Purchased	0	1828	R.W. Loane and Lascelles		0	93	1.08	Intermediate free		500 acres sold, probably in two sales
William Kermode		Campbell Town / Ross	Purchased	0	0			0	414	0			lots of 10 acres sold
John Roberts		Campbell Town / Ross	Granted	0	0			0	1187	0.88	Intermediate free		
William Hill		Campbell Town / Ross	Purchased	0	1830		William Barnes	0	640	1	Open extensive		
Robert Officer		New Norfolk	Granted	0	0			0	20	0.99	Riverine intensive		
D. W.		New Norfolk	Granted	0	0			0	14	0	Riverine intensive		
Joseph Pico Gellibrand		Campbell Town / Ross		0	0			0	1368	0.73			
M.J. Triffitt		New Norfolk	Purchased	0	1829		Mills, Philip	0	27	2.78	Uncategorised		72 acres sold

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
J. Pillinger		Campbell Town / Ross	Purchased	0	0			0	289	0.64			
John Bell		Campbell Town / Ross	Purchased	0	1833		C.E. Viveach	0	1152	0.52	Open extensive		1200 acres sold in two lots
John Bell		Campbell Town / Ross	Purchased	0	1833		C.E. Viveach	0	601	1.11	Open extensive		1200 acres sold in two lots
George Frederick Read		New Norfolk	Granted	0	1835	J. Turnbull		0	372	1.08	Intermediate free		500 acres sold, probably in two sales
Michael Vicary		Campbell Town / Ross		0	1834		G.C. Clark	0	2217	1.15	Open extensive		
A.F. Hogg		Campbell Town / Ross	Granted	0	1828	Joseph Allan		0	790	0.91	Intermediate free		
T. Reynolds		New Norfolk	Purchased	0	1835	J. RIley		0	57	0.98	Uncategorised		50 acres to Laughlin Reynolds, this property is on the boundary and may be it
Charles B Viveash		Campbell Town / Ross	Granted	0	0			0	1271	0.96			
J. Thompson		Campbell Town / Ross	Located	0	1832		Robert Taylor	0	324	1.02	Open extensive		860 acres sold, combined with another
J. Thompson		Campbell Town / Ross	Located	0	1832		Robert Taylor	0	733	0.89	Open extensive		860 acres sold, combined with another
E.F.T. Kemp		New Norfolk	Purchased	0	1830		Barker, R.	0	80	0.94	Intermediate free		"A.F. Kemp"
Andrew Gatenby		Campbell Town / Ross	Purchased	0	0			0	397	0.97	Intermediate free		

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George Salier		New Norfolk	Granted	0	1834		Walker, John Curwen	0	672	0.95	Open extensive		"Salter", 648 acres mortgaged
V.A. Reason		New Norfolk	Purchased	0	1834		Wellard, Emmanuel	0	33	1	Uncategorised		30 acres listed
William Jarvis		New Norfolk	Granted	0	1835	M.A.Fitzgerald		0	207	0.97	Intermediate free		
James Scott		New Norfolk	Purchased	0	1828		Bradbury, Sarah	0	492	1.02	Intermediate free		
E.G. Terry		New Norfolk	Purchased	0	0			0	486	0.99	Intermediate free		
J. Gunnings		New Norfolk	Located	0	0			0	422	0.99	Intermediate free		
A. Rainbird		New Norfolk	Purchased	0	0			0	112	0.96	Intermediate free		
George Milne		New Norfolk	Located	0	1829		Abel, William Jr	0	348	0.95	Open extensive		300 acres listed
Kilderry Gaol Farm		New Norfolk		0	0			0	1590	0.92	Open extensive		
James Gibson		New Norfolk	Purchased	0	0			0	685	0.93	Open extensive		
John James Clifford		New Norfolk	Purchased	0	1831		Cart, Robert	0	109	0.92	Uncategorised		"J. Clissold"
E.J. Lester		New Norfolk	Purchased	0	1829	P. Mills		0	27	0.89	Uncategorised		"Joseph Lester"
W. Hazlewood		New Norfolk	Located	1805	0			0	27	0	Riverine intensive		
J. Dumaresq		New Norfolk	Granted	1808	1830	A.F. Kemp		0	19	1.03	Riverine intensive		Henry Mitchell here in 1809
Thomas Nicholson		New Norfolk	Granted	1808	0			0	46	0.86	Riverine intensive		33 acres listed

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David Jamieson		New Norfolk	Granted	1808	0			0	43	0.91	Riverine intensive		
C. Driscoll		New Norfolk	Granted	1808	1831	A. Taylor		0	39	0.95	Riverine intensive		35 acres listed, to Cartwright
G. Butler		New Norfolk	Granted	1808	0			0	41	0.93	Riverine intensive		
A. McNaughton		New Norfolk	Granted	1808	0			0	42	1.01	Riverine intensive		
J. Thornton		New Norfolk	Granted	1808	0			0	41	0.93	Riverine intensive		
Charles Morey		New Norfolk	Granted	1808	0			0	89	1.34	Patchwork		
S. King		New Norfolk	Located	1808	0			0	20	0	Riverine intensive		28 acres listed,
H.L.Y. Nicholson		New Norfolk	Granted	1808	0			0	29	0	Intermediate free		
		New Norfolk		1808	0			0	6	0	Riverine intensive		
T. Lightfoot		New Norfolk	Granted	1808	0			0	15	1.18	Riverine intensive		27 acres listed
		New Norfolk		1808	0			0	1	0	Riverine intensive		
J. Triffith		New Norfolk	Located	1808	0			0	53	0	Intermediate free		130 acres listed
T. Lightfoot		New Norfolk	Granted	1808	0			0	96	0.75	Patchwork		70 acres listed
H. Fletcher		New Norfolk	Purchased	1808	0			0	96	0.91	Intermediate free		
A. Bromfield		New Norfolk	Purchased	1808	0			0	54	0.81	Intermediate free		

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T. Thornton		New Norfolk	Granted	1808	0			0	29	2.05	Intermediate free		
Robert Officer		New Norfolk	Granted	1808	0			0	99	0.97	Intermediate free		30 acres listed
Robert Officer		New Norfolk	Granted	1808	0			0	30	1.82	Uncategorised		
New Norfolk Investment Pty Ltd		New Norfolk	Purchased	1808	0			0	56	0.61	Intermediate free		
J.T. Gellbrand		New Norfolk	Granted	1808	0			0	37	1.53	Intermediate free		
Alfred __tt		New Norfolk	Granted	1808	0			0	124	0.99	Intermediate free		
__tt		New Norfolk		1808	0			0	45	0	Riverine intensive		
T. Triffitt		New Norfolk	Granted	1808	0			0	48	0.99	Riverine intensive		43 acres listed
		New Norfolk		1808	0			0	22	0	Uncategorised		
G. Cartwright		New Norfolk	Granted	1808	0			0	44	1.57	Uncategorised		65 acres listed
New Norfolk INvestments		New Norfolk	Granted	1808	0			0	14	1.28	Riverine intensive	H.R.A. 1820	Michael Newhouse originally
A. Fletcher		New Norfolk	Located	1809	0			0	102	1.03	Riverine intensive		"Mary Fletcher"
Wood		New Norfolk	Located	1809	0			0	23	0	Riverine intensive		30 acres listed
C.J. Jones		New Norfolk	Purchased	1809	0			0	34	0.91	Intermediate free		

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Nanda Antonie		New Norfolk	Located	1809	0			0	40	0.96	Riverine intensive		36 acres listed
W. Able Sr		New Norfolk	Located	1809	0			0	58	1.72	Intermediate free		30 acres listed
T. Murphy		New Norfolk	Located	1809	1829		Bell, John	0	57	0	Riverine intensive		60 acres sold
T. Guy		New Norfolk	Located	1813	0			0	15	0.94	Riverine intensive		Combined with next door
William Smith		New Norfolk	Granted	1813	0			0	43	1.06	Riverine intensive		Could be Guy, 32 acres
William Murray		New Norfolk	Granted	1813	0			0	32	0.91	Riverine intensive		
Edward Dumaresq		New Norfolk	Granted	1813	1830	A.F. Kemp		0	105	0.95	Patchwork		120 acres listed, divided with another block
C.G.H. Lloyd		New Norfolk	Granted	1813	0			0	95	1	Intermediate free		Saib (27 acres) and Buckall (30) acres here on other charts
J. Eddison		Evandale	Located	1813	0			39.5	42	0	Riverine intensive	H.R.A. 1820	40 acres surveyed, but not granted
H. Anson		New Norfolk	Granted	1813	1831	R.J.Conn		0	35	1.06	Riverine intensive		
W.T.N. Champ		New Norfolk	Granted	1813	0			0	35	1.1	Riverine intensive		
W.T.N. Champ		New Norfolk	Granted	1813	0			0	63	1.02	Intermediate free		42 acres listed
Hibbins		New Norfolk	Located	1813	0			0	71	0	Uncategorised		92 acres to Thomas Hibbins
J. Davis		New Norfolk	Located	1813	0			0	25	0	Riverine intensive		

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T. Triffitt		New Norfolk	Granted	1813	1832		Solomon, Judah	0	56	1.05	Riverine intensive		65 acres listed
M. Dickson		New Norfolk	Granted	1813	0			0	21	0.82	Riverine intensive		
J. Hay		New Norfolk	Granted	1813	0			0	20	0.75	Riverine intensive		16 acres pasture
R. Bradshaw		New Norfolk	Purchased	1813	0			0	112	0.93	Patchwork		43 acres listed
C. Clarke		New Norfolk	Located	1813	0			0	30	0.68	Riverine intensive		
Thomas Shone		New Norfolk	Located	1813	0			0	96	0.83	Riverine intensive		80 acres listed
Thomas Shone		New Norfolk	Granted	1813	0			0	66	3.04	Patchwork		
Edward Westwood		New Norfolk	Located	1813	0			0	114	0.97			
B.A. Man		New Norfolk	Granted	1813	0			0	51	0.93	Riverine intensive		
Barrett		New Norfolk	Granted	1813	0			0	46	0	Riverine intensive		
B. Barratt		New Norfolk	Granted	1813	0			0	35	1.2	Riverine intensive		
W. Able Jr		New Norfolk	Located	1813	0			0	66	1.5	Intermediate free		No land in 1819, this property may belong to William Abel Sr.
J.H. Cawthorne		New Norfolk	Located	1813	0			0	1186	0.84	Open extensive		
E. Hackery		New Norfolk	Located	1813	0			0	18	0.89	Riverine intensive		20 acres listed
W. Marshall		New	Granted	1813	0			0	14	2.67	Uncategorised		

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		Norfolk											
		New Norfolk		1813	0			0	25	0	Uncategorised		40 acres listed
		New Norfolk		1813	0			0	30	0	Uncategorised		
Jack Scott		New Norfolk	Granted	1814	0			0	35	1.01	Uncategorised		
H.A. Warner		New Norfolk	Purchased	1814	0			0	33	0.94	Uncategorised		
J.L. Cranfield		New Norfolk	Purchased	1814	0			0	17	1.33	Uncategorised		Front River
R. Jordan		Evandale	Located	1815	0			50	58	0	Riverine intensive	List of Settlers after 1820	60 acres listed
W. Saltmarsh		Evandale	Located	1815	0			50	48	0	Patchwork	List of Settlers after 1820	
John Stevens		Evandale	Located	1815	1832		J. Solomon	80	99	0	Riverine intensive	List of Settlers after 1820	
Andrew Barclay		Evandale	Located	1816	0			500	525	0	Open extensive	H.R.A. 1820	
A. Barclay		Evandale	Granted	1817	0			330	348	0.95	Open extensive	H.R.A. 1820	300 acres surveyed, but not granted
Gibson		Campbell Town / Ross		1817	0			0	36	0		H.R.A. 1820	
T.G. Marshall		New Norfolk	Purchased	1817	0			0	37	1			
Bradshaw		New Norfolk	Purchased	1817	0			0	26	0.98	Uncategorised		
George Salier		New Norfolk	Granted	1817	0			0	210	0.97			"Salter", 260 acres listed
Richard Barker		New	Located	1817	0			0	1074	1.45	Open extensive		

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		Norfolk											
R. Barker		New Norfolk	Located	1817	0			0	304	5.13	Intermediate free		
Thomas Reibey		Evandale	Purchased	1818	0			536.75	556	0	Open extensive		300 acres listed
Richard Barker		New Norfolk	Located	1818	0			0	591	1.69	Open extensive		
R. Barker		New Norfolk	Located	1818	0			0	114	8.8	Intermediate free	Land Commissioners' Journal	Grant combined with purchse, from Fords
Henry Croswell		New Norfolk	Granted	1819	0			0	26	1.14	Riverine intensive		Probably the 26 acres pasture listed in the muster (of 44 acres total)
W. Carey		Evandale		1819	0			60	27	0	Patchwork		50 acres listed
James Cox		Evandale	Granted	1819	0			1254	204	6.15	Intermediate free		1300 acres listed
James Cox		Evandale	Granted	1819	0			1254	223	5.62	Patchwork		1300 acres listed
J. Gildas		Evandale	Located	1819	0			50	56	0	Patchwork	List of Settlers after 1820	
G. Jubb		Evandale	Located	1819	0			130	56	0	Patchwork		Combined with another, to form the 230 acres sold to Jubb and Wooley.
Patrick Kanes		Evandale	Located	1819	0			30	46	0	Patchwork		
M. Kirk		Evandale	Located	1819	0			33	32	0	Intermediate free	Land Commissioners' Journal	No acreage listed, but subdivded from Reibey's property
J. McHugh		Campbell Town / Ross	Located	1819	0			38	37	0			No acreage listed

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W. Saltmarsh		Evandale	Located	1819	0			60	63	0	Riverine intensive	LIst of Settlers after 1820	
E. Wooley		Evandale	Located	1819	0			100	128	0	Patchwork	List of Settlers after 1820	Combined with another, to form the 230 acres sold to Jubb and Wooley.
James A. Youl		Campbell Town / Ross	Granted	1819	1826			727.5	767	0		Stieglitz, A History of Evandale, p.46	
George Frederick Read		New Norfolk	Located	1820	0			0	421	0.83	Open extensive	List of Settlers after 1820 & VDL, Scott (1824)	
Walter Angus Bethune		New Norfolk	Located	1820	1835		Ramus, Mary Ann Marie	0	604	0.66	Intermediate free	List of Settlers after 1820 & VDL, Scott (1824)	
George Frederick Read		New Norfolk	Located	1820	0			0	882	0.91	Open extensive	List of Settlers after 1820 & VDL, Scott (1824)	
David Jamieson		New Norfolk	Located	1820	1829		Terry, John	0	1255	0.8	Open extensive	Land Commissioners ' Journal	Date estimated - 'extensive work' done by 1826
Thomas Roadnight		New Norfolk	Located	1820	0			0	616	0.97	Intermediate free	CSO 1/335/7687 in Fitzsymond's, Looking Glass for Tasmania, p.88	
M. Campbell		Evandale	Granted	1820	1827	Norfolk Piper (Mrs Gibson's		298	331	0	Intermediate free	Stieglitz, A History of Evandale, p.2	

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						son)							
W, Connison		Evandale	Located	1820	0			60	55	0	Intermediate free	List of Settlers after 1820	50 acres listed
J. Dawson		Evandale	Located	1820	0			43.5	45	0	Patchwork	H.R.A. 1820	40 acres surveyed, but not granted
J. Hassan		Evandale	Located	1820	0			40	21	0	Patchwork	List of Settlers after 1820	
Charles Fletcher Howard		Evandale	Granted	1820	0			106.25	99	0	Patchwork	H.R.A. 1820	100 acres surveyed, but not granted
R. McDonald		Evandale	Located	1820	0			100	33	0	Uncategorised	List of Settlers after 1820	
D. McLeod		Evandale	Located	1820	1832		S. Bowen	0	40	0	Patchwork	Stieglitz, A History of Evandale, p.26	37 acres listed
H. Mullens		Evandale	Located	1820	0			43	43	0	Patchwork	H.R.A. 1820	40 acres surveyed, but not granted
Kennedy Murray		Evandale	Granted	1820	0			62.5	65	0	Patchwork	List of Settlers after 1820	60 acres listed
Nicholds		Campbell Town / Ross		1820	0			0	51	0		H.R.A. 1820	"Elizabeth Nichol(d)s", 50 acres surveyed, but not granted.
J. Porter		Evandale	Located	1820	1828		W.N. Gray	0	80	0	Patchwork	H.R.A. 1820	"Samuel Porter", 60 acres surveyed but not granted. "Elizabeth Porter", 60 acres listed
R.A. Rayner		New Norfolk	Purchased	1820	0			0	106	0.95		List of Settlers after 1820	100 acres listed

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Thomas Bell		Bothwell	Located	1820	0			800	895	0.89	Open extensive	List of Settlers after 1820	
R. Saggers		Evandale	Granted	1820	0			73	77	0	Patchwork	Stieglitz, A History of Evandale, p.80	
Mary Smith		Evandale	Granted	1820	1834		R. Ruffin	56	54	0	Riverine intensive	List of Settlers after 1820	50 acres listed
Mary Smith		Evandale	Granted	1820	0			34	35	0	Riverine intensive	H.R.A. 1820	35 acres surveyed but not granted to James Smith
P. Taylor		Bothwell	Located	1820	0			400	21	19.05	Uncategorised	List of Settlers after 1820	
L. Wriam		Evandale	Located	1820	0			40	42	0	Riverine intensive	List of Settlers after 1820	
George Piper		Bothwell		1820	0			80	84	0.95	Patchwork	List of Settlers after 1820	
John Wilson		Bothwell	Located	1820	0			818	904	0.9	Intermediate free	List of Settlers after 1820	
W.W. Williams		New Norfolk	Purchased	1820	0			0	71	0.94		LIst of Settlers after 1820	
J.A. Triffitt		New Norfolk	Purchased	1820	0			0	44	0.89			40 acres listed
Robert Neill Sr		New Norfolk	Located	1820	0			0	833	0.94	Open extensive		700 acres listed, "James Neill Sr"
John Ford		New Norfolk	Located	1820	0			0	727	1.1	Open extensive		
John Terry		New Norfolk	Located	1820	0			0	1363	1.03	Open extensive	Land Commissioners ' Journal	
Elizabeth Jones		New Norfolk	Granted	1820	0			0	56	0	Riverine intensive	H.R.A. 1820	

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Elizabeth Jones		New Norfolk	Granted	1820	0			0	56	0.54	Riverine intensive	H.R.A. 1820	
William Raynor Sr		New Norfolk	Granted	1820	0			0	86	0.93	Riverine intensive	H.R.A. 1820	
James Tedler		New Norfolk	Granted	1820	0			0	34	0.89	Riverine intensive	H.R.A. 1820	
Brien Cullen		New Norfolk	Granted	1820	0			0	44	0.91	Riverine intensive	H.R.A. 1820	
Samuel Bryan		Evandale	Located	1821	1833		J. Henley	2000	2360	0.85	Open extensive		"Brien"
Robert Barr		Bothwell	Located	1821	0			600	641	0.94	Open extensive		
Walter Davidson		Campbell Town / Ross	Purchased	1821	1834		T. Pearson	0	455	0.97	Patchwork		598 acres sold
Robert Bostock		Campbell Town / Ross	Granted	1821	0			0	997	1	Open extensive		
R. Thirkell		Campbell Town / Ross	Located	1821	0			0	102	0.98	Riverine intensive		
Henry Emmett		Campbell Town / Ross	Located	1821	1829		R.J. Conn	0	1409	0.78	Intermediate free		
William Kermode		Campbell Town / Ross		1821	0			0	2628	0.76	Open extensive		
Daniel Stanfield		Campbell Town / Ross		1821	0			0	293	0.99	Patchwork		
Michael Lackey		Campbell Town / Ross		1821	0			0	345	0.87	Patchwork		
Francis Desailly		Campbell Town / Ross		1821	0			0	320	0.94	Patchwork		
Edward Miller		Campbell Town / Ross	Located	1821	0			0	762	0.79	Intermediate free		
Maurice Smith		Bothwell	Located	1822	0			1300	1366	0.95	Intermediate free		

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Patrick Wood		Bothwell	Granted	1822	0	Ja Scott / R. Dosdworth (500 each)		1115	1184	0.94	Open extensive		
Alexander Reid		Bothwell	Located	1822	0			1400	1624	0.86	Intermediate free		
M. Wilson		Campbell Town / Ross	Located	1822	0			0	801	0.87	Intermediate free		
John Dunn		Campbell Town / Ross	Located	1822	0			0	1516	0.99	Open extensive		
John Bisdee		Bothwell	Purchased	1822	1831	Frederick Slade, Thomas Axford		640	629	1.02	Open extensive		700 acres listed to Slade
Herbert Hooper	Stephen Hooper	Bothwell	Granted	1822	0			661	690	0.96	Intermediate free		640 acres listed
Robert Officer		Bothwell	Located	1822	0			500	595	0.84	Intermediate free	"Sir Robert Officer", ADB	
James Robertson		Bothwell	Located	1822	0			1000	900	1.11	Intermediate free		
J. Sinclair		Evandale	Granted	1822	0			300	295	0	Patchwork		
Thomas Axford		Bothwell	Located	1822	1832		J. Sherwin	500	0	0	Intermediate free		
Alexander Reid		Bothwell	Located	1822	0			600	599	1	Intermediate free	"Alexander Reid", ADB	
Archibald McDowall		Bothwell	Granted	1822	1826	Capt Socketts then Birrell		820	802	1.02	Intermediate free	Land Commissioners' Journal	
R. Stoddart		Campbell Town / Ross	Located	1822	0			0	884	0.79	Intermediate free		
Patrick Wood		Bothwell	Granted	1822	0			4960	5033	0.99	Open extensive		Two lots of 2000 acres

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George Nicholas		Bothwell	Granted	1822	0			1830	1881	0.97	Intermediate free		1800 acres listed to "Edward"
William Allardyce		Bothwell	Located	1822	0			748	846	0.88	Intermediate free	List of Settlers after 1820	
J. Oliver		Campbell Town / Ross	Located	1822	1833		A. Buist	0	528	0.95	Intermediate free		
W. Oliver		Campbell Town / Ross	Located	1822	1828		John Taylor	0	1151	0.87	Intermediate free		
Thomas Chapman		Campbell Town / Ross		1822	1829		Charles McLachlan	0	1070	0.65	Intermediate free		
Samuel Guy		New Norfolk	Granted	1822	0			0	766	1.04			
H. Robinson		Campbell Town / Ross	Located	1822	0			0	934	0.86	Intermediate free		
Francis Allison		Campbell Town / Ross	Granted	1822	0			0	1033	1.15	Intermediate free		
J. Turnball		New Norfolk	Granted	1822	1833		Barrow, William Warren	0	62	1.61	Intermediate free		
J. Turnbull		New Norfolk	Purchased	1822	0			0	63	10.23	Intermediate free		
J. Turnbull		New Norfolk	Purchased	1822	0			0	261	2.45	Intermediate free		
John Abbott		Campbell Town / Ross	Located	1823	0			0	2202	0.54	Open extensive		
Samuel Hill		Campbell Town / Ross	Granted	1823	0			0	1770	1.13	Open extensive		
Charles Seal		Bothwell	Located	1823	0			0	621	0	Intermediate free	"Charles Seal", ADB	600 acres listed

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
James Scott		Bothwell	Granted	1823	1828	John Scott		500	504	0.99	Intermediate free	List of Settlers after 1820 & "James Scott", ADB	
Patrick Wood		Bothwell		1823	0	J. Scott		299	303	0.99	Intermediate free		
Robert Jones		Bothwell	Purchased	1823	1835	Richard William Fryett		500	506	0.99	Open extensive		
George Russell	Wm. Lewis	Bothwell	Granted	1823	0	W. Rowcroft		1025	980	1.05	Open extensive		
A. Galloway		Campbell Town / Ross	Located	1823	0			0	483	0	Open extensive		
Frederick Champion		Bothwell	Located	1823	0			1000	1097	0.91	Open extensive		
Cecil Allport		Bothwell	Granted	1823	0	Joseph Bradbury		2293	2255	1.02	Open extensive	Monmouth 125, AF 396/1/334	
William Langdon		Bothwell	Granted	1823	0			1500	1503	1	Open extensive	"William Langdon", ADB	
John Sherwin		Bothwell	Located	1823	0			800	839	0.95	Open extensive	"Isaac Sherwin", ADB	
Thomas Axford		Bothwell	Granted	1823	0	John Bisdee		700	774	0.9	Intermediate free	Elis, Bothwell Revisited, p.28 & Monmouth 129, AF 396/1/338	
Thomas Bell		Bothwell	Located	1823	0			1200	1385	0.87	Open extensive	Land Commissioners ' Journal	

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
George Scott		Campbell Town / Ross	Located	1823	0			0	543	0.92	Open extensive		
Frederick Synnott	Walter Synnott	Bothwell	Granted	1823	1834	Stephen Adley and James Ross		1000	1161	0.86	Open extensive		Listed under "Ross"
Edwin Boutlbee		Campbell Town / Ross	Granted	1823	0			0	1524	0.85	Open extensive		500 acres listed
G. Taylor Sr		Campbell Town / Ross	Located	1823	0			0	833	0.96	Intermediate free		
G. Taylor Jr		Campbell Town / Ross	Located	1823	0			0	762	0.92	Intermediate free		
D. Taylor		Campbell Town / Ross	Located	1823	0			0	718	0.98	Intermediate free		
R. Taylor		Campbell Town / Ross	Located	1823	0			0	691	1.01	Intermediate free		
A. Buist		Campbell Town / Ross	Located	1823	1829		R. Forbes	0	776	0.9	Intermediate free		
R. Taylor		Campbell Town / Ross	Located	1823	0			0	587	0.85	Intermediate free		
Walter McQueen		New Norfolk	Granted	1823	0			0	580	1.03	Intermediate free		No district given
P. Dalrymple		Campbell Town / Ross	Located	1823	1830		John Foster	0	638	0.78	Intermediate free		
James Hume		Campbell Town / Ross	Located	1823	0			0	882	0.57	Intermediate free		
John Powell		Campbell Town / Ross	Located	1823	0			0	1286	0.93	Intermediate free		
James Dixon		Campbell Town / Ross	Granted	1823	0			0	2402	0.93	Open extensive		2000 acres listed
Andrew Gatenby		Campbell Town / Ross	Granted	1823	0			0	1488	1.01	Open extensive		

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Charles Baskerville Viveash		Campbell Town / Ross	Granted	1823	1830	H. Murray		0	1907	1.02	Intermediate free		800 acres granted in 1823, 800 acres granted in 1830
T.Y. Lowes		Campbell Town / Ross	Located	1823	1828		Andrew Gatenby	0	167	8.56	Patchwork		1200 acres sold, the rest elsewhere
James Mackersey		Campbell Town / Ross	Granted	1823	1829	J. Reid		0	2228	1	Intermediate free		2000 acres listed
John Gardiner		Campbell Town / Ross		1823	1828		L.W. GIlles	0	1017	0.79	Intermediate free		
George Eagle		Campbell Town / Ross		1823	0		A. Gatenby	0	501	1	Intermediate free		Possibly part of the 1128 sold to A. Gatenby in 1833
Edward Rand		Campbell Town / Ross	Granted	1823	1828		Thomas George Gregson	0	313	1.02	Intermediate free		500 acres listed
Henry Croswell		New Norfolk	Granted	1824	1827	John Pearce		0	395	1	Open extensive		No district given
George Brooks		Bothwell	Located	1824	0			500	563	0.89	Intermediate free		
Alexander Reid		Bothwell	Purchased	1824	0			119.75	113	1.06	Patchwork	VDL, Scott (1824)	
Alexander Reid		Bothwell	Purchased	1824	0			100	98	1.02	Patchwork	VDL, Scott (1824)	
Andrew Smith		Bothwell	Granted	1824	0			300	313	0.96	Intermediate free	List of Settlers after 1820	
George Thompson		New Norfolk	Located	1824	0			0	1101	0.91	Intermediate free		
Andrew Barclay		Evandale	Granted	1824	1829		J.C. Darke	410	449	0	Open extensive	VDL, Scott (1824)	
C. Campbell		Evandale	Granted	1824	0			215	229	0	Patchwork	VDL, Scott (1824)	

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Thomas Anstey		Bothwell	Granted	1824	1830	Thomas Branscombe, John Lakeland		300	348	0.86	Open extensive		
James Cox		Evandale	Granted	1824	0			500	497	1.01	Intermediate free	VdL, Scott (1824)	
James Cox		Evandale	Granted	1824	0			2448	1104	2.22	Open extensive		
James Cox		Evandale	Granted	1824	0			61	54	1.13	Intermediate free		
James Cox		Evandale	Granted	1824	0			126	140	0	Intermediate free		
William Kearney		Campbell Town / Ross	Granted	1824	0			0	441	0.93	Intermediate free		
William Kearney		Campbell Town / Ross	Granted	1824	0			0	410	1	Intermediate free		
W. Kenworthy		Evandale	Located	1824	1829		Wm. Barnes	1000	378	2.65	Patchwork		
Peter Lette		Evandale	Located	1824	0			2000	636	3.14	Open extensive	VDL, Scott (1824)	
J. Maclanachan		Bothwell	Located	1824	1829			100	118	0.85	Patchwork	"James Maclanachan", ADB	
W. Barnes		Campbell Town / Ross	Located	1824	1835		Robert Bostock	0	1062	0.94	Open extensive		
Patrick Wood		Bothwell	Granted	1824	1834	John Southam Evans		1072	1057	1.01	Open extensive	Land Commissioners ' Journal	500 acres to John Evans
A. Kenn		Campbell Town / Ross	Located	1824	0			0	865	2.31	Intermediate free		
Robert Ralston		Evandale	Located	1824	0			800	1011	0.79	Open extensive		
Samuel Reeves		Evandale	Granted	1824	0			640	656	0.98	Open extensive		
Alexander Rose		Evandale	Granted	1824	0			207	220	0	Patchwork	VDL, Scott	

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												(1824)	
A. Rose		Evandale	Granted	1824	0			90	86	0	Patchwork	VDL, Scott (1824)	
Thomas Scott		Evandale	Granted	1824	0			584	597	0	Open extensive	VDL, Scott (1824)	
James Robertson		Bothwell	Located	1824	0			500	627	0.8	Open extensive		
William Langdon		Bothwell	Granted	1824	1833	Samuel Hood		2000	2028	0.99	Open extensive	Land Commissioners ' Journal	
John Smith		Evandale	Located	1824	0			500	533	0	Open extensive	List of Settlers after 1820	
Joseph Bonney		Campbell Town / Ross	Granted	1824	0			0	732	0.96	Open extensive		
J.B. Thomas		Evandale	Granted	1824	1833	Joscelyn/Charlotte Thomas		300	298	1.01	Patchwork	Stieglitz, A History of Evandale, p.24	
J.S. Brodie		Bothwell	Granted	1824	0			1200	1210	0.99	Open extensive		
Patrick Wood		Bothwell	Granted	1824	1834	G.W. Evans		500	503	0.99	Intermediate free		
E.S.P. Bedford	William DeGillern	Bothwell	Granted	1824	0	Lucy Davey		1239	1187	1.04	Open extensive	Monmouth 129, AF 396/1/338 & "James Scott", ADB	1500 acres to William de Gillern, part of 4000 acres belonging to Lucy Davey
Theresa Wybalene Cox		Evandale	Purchased	1824	0			687.5	672	1.02	Open extensive	VDL, Scott (1824)	"Mr Cox"
Charlotte Youl		Campbell Town / Ross	Granted	1824	1826			486.5	514	0			
Humphrey Morgan Howells		Bothwell	Granted	1824	0			600	617	0.97	Open extensive		

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Jeremiah Ware		Bothwell	Granted	1824	0			315	318	0.99	Open extensive		
William Clarke		Bothwell	Granted	1824	0			2109	2159	0.98	Open extensive	Elis, Bothwell Revisited, p.115	
William Kermode		Campbell Town / Ross		1824	0			0	1421	0.7	Intermediate free		
D.W. Bush		New Norfolk	Granted	1824	0			0	55	0.91	Uncategorised		
George Carr Clarke		Campbell Town / Ross		1824	0			0	2122	0.94	Open extensive	"George Carr Clarke", ADB	
Michael Lackey		Campbell Town / Ross		1824	0			0	463	1.08	Patchwork		
George C. Clarke		Campbell Town / Ross	Granted	1824	0			0	2018	0.99	Open extensive	"George Carr Clarke", ADB	
T.W. Briggs		New Norfolk	Purchased	1824	1833	W. Grunwood		0	68	0.91	Uncategorised		
Andrew Bruce		Campbell Town / Ross	Located	1824	0			0	545	0.92	Intermediate free		
Joseph Bayles		Campbell Town / Ross	Granted	1824	0			0	1612	0.62	Open extensive		"John Bayles"
John Bayles		Campbell Town / Ross	Granted	1824	0			0	1745	0.81	Open extensive		1500 acreslisted
F. Raffey		Campbell Town / Ross	Located	1824	0			0	541	0.92	Intermediate free		"Ruffey"
W.J. Raffey		Campbell Town / Ross	Located	1824	0			0	487	1.03	Intermediate free		"Ruffey"
Charles Arthur		Bothwell	Granted	1825	0			2000	2093	0.96	Open extensive	"Charles Arthur", ADB	
Samuel Hill		Campbell Town / Ross	Granted	1825	0			0	1052	0.95	Open extensive		

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George Frederick Read		New Norfolk	Granted	1825	0			0	1318	0.98	Intermediate free	Military Map No. 2, Scott (1826)	
James Simpson		Campbell Town / Ross	Located	1825	0			0	921	1.09	Intermediate free		
William Morgan Orr		Bothwell	Purchased	1825	0			640	674	0.95	Open extensive	"William Morgan Orr", ADB	Part of 2000 acres granted
Sarah Bradbury		Bothwell	Granted	1825	0			331.5	352	0.94	Patchwork		
Kennedy Murray		Evandale	Granted	1825	0			55.75	59	0	Patchwork	Stieglitz, A History of Evandale, p.42	
John Ibbott		Bothwell	Granted	1825	0			1500	1561	0.96	Open extensive		
Robert Jones		Bothwell	Granted	1825	0			100	97	1.03	Intermediate free		
Robert Jones		Bothwell	Granted	1825	1833	Henry Jones		106	111	0.95	Intermediate free		
William Crowther		Bothwell	Granted	1825	0			800	766	1.04	Open extensive		
John Smith		Evandale	Located	1825	0			300	297	0	Open extensive		
A. Waddle		Evandale	Granted	1825	1834		P. Oakden	60	44	0	Patchwork		
James White		Evandale	Located	1825	0			39	39	0	Intermediate free		
Edward Abbott Sr		Campbell Town / Ross	Located	1825	1835		R.H. Willis	0	3142	0.95	Open extensive	"Edward Abbott", ADB	An additional 210 acres in Launceston
Nathan Elliott		Bothwell	Granted	1825	0			488.5	623	0.78	Intermediate free		
John Cassidy		Campbell Town / Ross	Granted	1825	0			0	212	0.94	Intermediate free		

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John Cassidy		Campbell Town / Ross	Granted	1825	1828	William Dalrymple Kelman		0	735	0.91	Intermediate free		630 acres listed
Alfred Stephen		Campbell Town / Ross		1825	1832		G.C. Clark	0	1899	1.05	Open extensive		
A. Williams		New Norfolk	Granted	1825	0			0	77	0.99		Military Map No. 2, Scott (1826)	
Peter Graham		Campbell Town / Ross		1825	0			0	622	1.03	Open extensive		
J.C. Sutherland		Campbell Town / Ross	Granted	1825	0			0	525	0.91	Open extensive		
B.V. Cox		New Norfolk	Purchased	1825	0			0	35	0.89		Military Map No. 2, Scott (1826)	
A. Wood		Campbell Town / Ross	Purchased	1825	1834	McDowall, Arch		0	494	1.05	Open extensive		
Ann Bridger		New Norfolk	Granted	1825	0			0	106	0.94	Intermediate free	Land Commissioners ' Journal	
Ellis Dean		New Norfolk	Granted	1825	0			0	190	0.96	Intermediate free	Military Map No. 2, Scott (1826)	
S. Hill		Campbell Town / Ross	Granted	1826	0			0	185	0.97	Open extensive		
Thomas Triffett		Bothwell	Located	1826	0			500	503	0.99	Intermediate free		
Henry Melville		New Norfolk	Granted	1826	1834	Jane (and Oscar) Davis	W. Williams	0	155	0.97	Intermediate free	AF 396/1/27 & AF 396/1/33	

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G.P. Adams		Evandale	Granted	1826	0			28.5	32	0	Patchwork	Land Commissioners' Journal	Subdivided from Reibey's property
A. Cotterell		Evandale	Located	1826	0			650	731	0.89	Intermediate free	Land Commissioners' Journal	
Robert Barr		Bothwell	Purchased	1826	0			320	349	0.92	Open extensive	Land Commissioners' Journal	
Robert Barr		Bothwell	Purchased	1826	0			947	948	1	Open extensive	Land Commissioners' Journal	
Robert Barr		Bothwell	Purchased	1826	0			350	345	1.01	Open extensive	Land Commissioners' Journal	
W.I. Goodwin		Evandale	Granted	1826	0			30	28	0	Patchwork	Land Commissioners' Journal	Subdivided from Reibey's property
B. Goulding		Evandale	Located	1826	0			36	35	0	Intermediate free	Land Commissioners' Journal	40 acres listed, subdivided from Reibey's property
James Robertson		Campbell Town / Ross	Granted	1826	0			0	788	1.02	Open extensive		
Innes	Laidley	Evandale	Granted	1826	0			44	49	0	Intermediate free	Land Commissioners' Journal	Subdivided from Reibey's property
T. Landale		Evandale	Granted	1826	0			100	104	0	Patchwork	Land Commissioners' Journal	
Thomas Landale		Evandale	Granted	1826	0			146	159	0	Intermediate free	Land Commissioners' Journal	

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
J. Sinclair		Campbell Town / Ross	Located	1826	0			0	305	0.98	Intermediate free	H.R.A. III(v)	
Agnes Cundell		Bothwell	Located	1826	0			500	479	1.04	Open extensive	Land Commissioners ' Journal	
G. Scott		Campbell Town / Ross	Located	1826	0			0	209	0.95	Patchwork	H.R.A. III(v)	
J. Bisdee		Bothwell	Purchased	1826	0			400	436	0.92	Intermediate free		
Thomas Hooper		Bothwell	Granted	1826	0			50	57	0.88	Intermediate free	Land Commissioners ' Journal	
William Langdon		Bothwell	Granted	1826	0			1998	1998	1	Intermediate free	Land Commissioners ' Journal	
T. Hoskisson		Campbell Town / Ross		1826	0			0	75	0.8			
W. Milne		Campbell Town / Ross		1826	0			0	117	0.85	Intermediate free	H.R.A. III(v)	
Adam Robertson		Campbell Town / Ross		1826	0			0	441	0.68	Patchwork		
W. Pender		Campbell Town / Ross	Granted	1826	1835		John Johnston(e) and George Madden	0	124	0.81	Intermediate free		
W. Robertson		Campbell Town / Ross	Located	1826	1833		B. Dickson	0	213	0.94	Patchwork		
George Gatenby		Campbell Town / Ross	Located	1826	0			0	507	0.99	Intermediate free		
John Bayles		Campbell Town / Ross	Located	1826	0			0	530	0.97	Intermediate free		500 acres listed

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Fred Crawley		Evandale	Located	1827	1831		Henry Reed	1000	965	1.04	Intermediate free		
Robert Barr		Bothwell	Granted	1827	0			994	995	1	Open extensive		1000 acres listed
John Knight		Evandale		1827	0			327	94	0	Patchwork		
A. Turnbull		Campbell Town / Ross	Located	1827	0			0	754	1.06	Open extensive		
Patrick Wood		Bothwell	Granted	1827	1831	Thomas Gourlay		1200	1065	1.13	Open extensive		Combination of 700 acres (granted 1825) and 500 (1829-30)
J.H. Wedge		Campbell Town / Ross	Granted	1827	0			0	554	0	Open extensive		500 acres listed
Jno Walker		Campbell Town / Ross	Located	1827	1830		J.R. Murphy	0	223	0.9	Intermediate free		
John Burnett		Campbell Town / Ross	Granted	1827	0			0	2423	1.06	Intermediate free		
James Wright		Campbell Town / Ross		1827	0			0	1176	0.85	Open extensive		
Jno Bell		Campbell Town / Ross		1827	0		Charles Swanston and G.F. Read	0	2542	0.79	Open extensive		
Hy Forster		Campbell Town / Ross	Located	1827	1833		A. Gatenby	0	500	1	Open extensive		
Edward Bisdee		Campbell Town / Ross	Purchased	1827	0			0	726	0.98	Open extensive		
D. Collins		Evandale	Granted	1828	0			35.25	45	0	Patchwork	Stieglitz, A History of Evandale, p.15	
Robert Jones		Bothwell	Granted	1828	0			220	215	1.02	Open extensive		"John"

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Leweis Gillies		Evandale	Located	1828	0			1000	1013	0.99	Intermediate free		
William Kearney		Campbell Town / Ross	Granted	1828	0			0	1067	0.94	Open extensive		
Archibald McDowall		Bothwell	Granted	1828	0			500	509	0.98	Open extensive		
James Aitkin		Campbell Town / Ross	Granted	1828	0			0	596	1.01	Intermediate free		
John Johnson		Bothwell	Granted	1828	0			1500	1489	1.01	Open extensive		
D. Ralston		Evandale	Located	1828	0			500	547	0.91	Open extensive		
Henry Reid		Evandale	Located	1828	0			640	726	0.88	Intermediate free		
Robert Jones		Bothwell	Granted	1828	0			520	529	0.98	Open extensive		
John Sevior		Evandale	Located	1828	0			500	494	1.01	Intermediate free		
Thomas Scott		Campbell Town / Ross		1828	0			0	981	1.02	Intermediate free		
Thomas Scott		Campbell Town / Ross	Purchased	1828	0			0	497	1.01	Intermediate free		
George Scott		Campbell Town / Ross	Located	1828	0			0	740	1.08	Open extensive		
G. Stewart		Campbell Town / Ross	Located	1828	0			0	576	0.94	Open extensive		
Thomas Scott		Campbell Town / Ross	Purchased	1828	0			0	893	1.12	Open extensive		
William Bunster		Campbell Town / Ross	Located	1828	0			0	1948	1.06	Open extensive		
George C. Clark		Campbell Town / Ross	Granted	1828	0			0	1125	0.95	Open extensive		1000 acres listed

Name	Other landholders	District	Type (as on LDC)	Year of alienation	Second year	Bought from	Sold to	Acres recorded on LDC	Calculated acres	Official acres as proportion of whole	Pattern type	Source (if not a muster, AC 384, HRA or Land Conveyance register)	Notes
Josiah Spode		New Norfolk	Granted	1828	1828	J. Cummins		0	440	1.14	Intermediate free		500 acres listed
J. Connell		Campbell Town / Ross	Located	1828	0			0	170	1.88			
John Headlam		Campbell Town / Ross	Granted	1828	0			0	585	0.97	Open extensive		500 acres listed
John Doran		New Norfolk	Located	1828	0			0	162	1.97			
A. Gatenby		Campbell Town / Ross		1828	0			0	1033	0.97	Open extensive		
Andrew Smith		Bothwell	Granted	1829	0			200	215	0.93	Intermediate free		
T. Archer		Evandale	Granted	1829	0			73	94	0	Patchwork	Alienation of Crown Lands	60 acres listed
Alexander Bankier		Evandale	Located	1829	0			2560	2591	0.99	Intermediate free	Alienation of Crown Lands	
Edward French		Evandale	Located	1829	0			320	348	0	Open extensive		
Humphrey Grey		Campbell Town / Ross	Granted	1829	0			0	1567	1	Open extensive	Alienation of Crown Lands	
Archibald McDowall		Bothwell	Granted	1829	0			400	396	1.01	Open extensive		
T. Pearson		Campbell Town / Ross	Purchased	1829	1833		Robert Bostock	0	292	1.03	Patchwork	Alienation of Crown Lands	
Elizabeth Lette		Evandale	Granted	1829	0			2000	2225	0.9	Open extensive	Alienation of Crown Lands	
William Bonnilly		Campbell Town / Ross	Located	1829	0			0	717	0.89	Open extensive	Alienation of Crown Lands	
Robert Bostock		Campbell Town / Ross	Granted	1829	0			0	1032	0.99	Open extensive	Alienation of Crown Lands	
R. Pitcairn		Evandale	Purchased	1829	0			719	756	0.95	Intermediate free	Alienation of Crown Lands	800 acres listed

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Patrick Wood		Bothwell	Granted	1829	1833		P. Russell	1000	788	1.27	Open extensive		
M. Ralston		Evandale	Purchased	1829	0			640	650	0.98	Intermediate free	Alienation of Crown Lands	
Thomas Scott		Evandale	Granted	1829	0			556	561	0	Open extensive		
Thomas Scott		Evandale	Granted	1829	0			558	569	0	Open extensive	Alienation of Crown Lands	560 acres listed
John Tweed Pike		Evandale	Located	1829	1832		Samuel Bryan	1560	1597	0.98	Intermediate free		1000 acres sold
William Clarke		Bothwell	Located	1829	0			1917	1190	1.61	Open extensive		
E. Nicholas		Bothwell	Located	1829	0			1000	987	1.01	Open extensive		
William Bunster		Campbell Town / Ross	Granted	1829	1833	George Robson		0	2398	1.07	Open extensive		
Charles Swanston		Campbell Town / Ross	Granted	1829	1832		W.H. Hamilton	0	2147	0.96	Open extensive		2560 acres listed
Thomas Robertson		Campbell Town / Ross		1829	0			0	582	0.55	Patchwork		
John Foster		Campbell Town / Ross	Located	1829	0			0	631	0.79	Intermediate free		1000 acres listed, "Jane Foster"
Jane Foster		Campbell Town / Ross	Located	1829	0			0	657	0.76	Intermediate free		1000 acres listed, "Jane Foster"
Alex F. Hogg		Campbell Town / Ross	Purchased	1829	0			0	1369	0.94	Open extensive		
Jane Forster		Campbell Town / Ross	Located	1829	0			0	1074	0.93	Open extensive	Alienation of Crown Lands	
C.B. Viveash		Campbell Town / Ross	Granted	1829	0			0	935	0.93	Open extensive		
James Gibbiston Sutherland		Campbell Town / Ross	Granted	1829	0			0	2301	0.96	Open extensive		Two lots of 1000 acres

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C.J. Headlam		Campbell Town / Ross	Granted	1829	0			0	670	0.9	Open extensive		
Francis Allison		Campbell Town / Ross	Purchased	1829	0			0	1624	0.83	Intermediate free		
Josiah Spode		New Norfolk	Granted	1829	0			0	1080	0.93	Open extensive		
Michael Jones		Bothwell	Purchased	1830	0			320	326	0.98	Patchwork		"Robert"
Humphrey Morgan Howells		Bothwell	Granted	1830	0			1000	1036	0.97	Open extensive		
Hezekiah Harrison		Campbell Town / Ross	Granted	1830	1831		G. Parkyns	0	1244	1.01	Open extensive	Alienation of Crown Lands	
Samuel Horton		Campbell Town / Ross	Granted	1830	0			0	990	1.06	Intermediate free	Alienation of Crown Lands	
John Batman		Campbell Town / Ross		1830	0			0	2137	0.94	Open extensive		With Clarke G.C.
Henry Bridger		New Norfolk	Located	1830	0			0	327	0.98	Intermediate free		
Bassett Dickson		Campbell Town / Ross	Located	1830	0			0	2296	0.87	Open extensive	Alienation of Crown Lands	
James Mackersay		Campbell Town / Ross	Located	1830	0			0	984	1.02	Open extensive		
D. O'Sullivan		Campbell Town / Ross	Located	1830	1834		J. Connell	0	283	1.13	Patchwork		
George Gatenby		Campbell Town / Ross	Located	1830	0			0	723	0.69	Intermediate free		
John Gatenby		Campbell Town / Ross	Located	1830	0			0	376	0.85	Intermediate free		
John Sargant Sherwin		Bothwell	Granted	1831	0			477.5	496	0.96	Patchwork	Register of Land Grants & "Isaac	

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												Sherwin", ADB	
Robert Jones		Bothwell	Purchased	1831	0			210	210	1	Open extensive		200 acres listed
T. Pearson		Campbell Town / Ross	Purchased	1831	1833	Cotter, B		0	634	1.03	Open extensive		
Robert Patterson		Bothwell	Granted	1831	1833	Lowe, George		980.25	980	1	Open extensive		1000 acres granted to George Lowe, sold to J.H. Patterson in this parish.
Thomas Doran		Bothwell	Located	1831	0			200	197	1.02	Patchwork		
K. Murray		Evandale	Granted	1831	0			334	352	0.95	Open extensive	Stieglitz, A History of Evandale, p.42	
James A. Youl		Campbell Town / Ross	Granted	1831	0			0	1036	0.98	Intermediate free		
William Wood		Campbell Town / Ross	Granted	1831	0			0	1054	0.95	Open extensive		
Thomas Hooper		Bothwell	Granted	1831	0			500	515	0.97	Intermediate free		
Alexander Reid		Bothwell	Granted	1831	0			1000	1001	1	Open extensive		
Thomas Archer		Campbell Town / Ross	Granted	1831	0			0	1505	1	Open extensive		
Matthew Forster		Campbell Town / Ross	Granted	1831	0			0	2645	0.97	Intermediate free		
Duncan McRae		Bothwell	Located	1831	0			1920	672	2.86	Intermediate free		
Hector McRae		Bothwell	Granted	1831	0			1280	1260	1.02	Intermediate free		
Francis Walter		Campbell	Granted	1831	0			0	2904	0.88	Open extensive		

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Stiegl		Town / Ross											
John Cassidy		Campbell Town / Ross		1831	0			0	602	1.06	Open extensive		
J. Dickenson		Campbell Town / Ross	Located	1831	1832		W. Orr	0	326	0.98	Uncategorised		380 acres listed
Thomas Parramore		Campbell Town / Ross	Granted	1831	0			0	1231	1.04	Open extensive		
Hugh Robertson		Campbell Town / Ross		1831	0			0	728	1.37	Open extensive		
Joseph Tice Gellibrand		Campbell Town / Ross		1831	0			0	3531	0.85	Open extensive		
George Carr Clarke		Campbell Town / Ross		1831	0			0	1004	1	Intermediate free		
John Franks		Campbell Town / Ross		1831	0			0	1008	0.99	Open extensive		500 acres listed 'at the Lakes'
Joseph McEwer		Campbell Town / Ross		1831	1832		J. Bayles	0	460	1.09	Patchwork		
Arthur O'Connor		Campbell Town / Ross	Purchased	1831	1832	Bamber, John		0	556	0.89	Open extensive		
J. Moore		Evandale	Located	1832	1834		J. Ralston	320	334	0.96	Patchwork		
Benjamin Horne		Campbell Town / Ross	Purchased	1832	0			0	3683	1.09	Intermediate free	Hobart Town Courier, 15 June 1832	
Arthur Smith		Campbell Town / Ross	Purchased	1832	0			0	4045	0.99	Intermediate free	Hobart Town Courier, 15 June 1832	
Arthur Smith		Campbell Town / Ross	Purchased	1832	0			0	4329	0.92	Intermediate free	Hobart Town Courier, 15 June 1832	

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Lewis Smith		Campbell Town / Ross	Purchased	1832	0			0	4107	0.97	Intermediate free	Hobart Town Courier, 15 June 1832	
Philip Thomas Smith		Campbell Town / Ross	Purchased	1832	0			0	4012	1	Intermediate free	Hobart Town Courier, 15 June 1832	
Philip Thomas Smith		Campbell Town / Ross	Purchased	1832	0			0	3965	1.01	Intermediate free	Hobart Town Courier, 15 June 1832	
Philip Thomas Smith		Campbell Town / Ross	Purchased	1832	0			0	4098	0.98	Intermediate free	Hobart Town Courier, 15 June 1832	